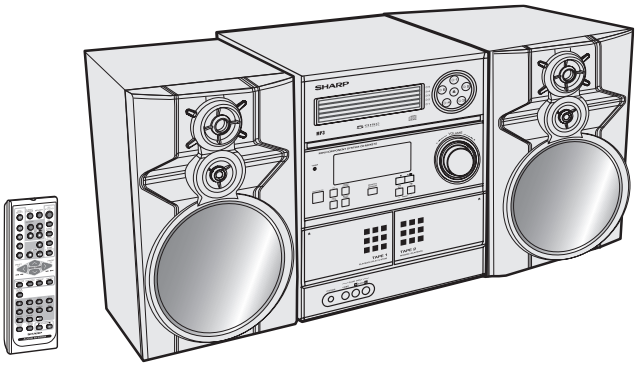
SHARP SERVICE MANUAL

No. S6622CDMP870W



MINI COMPONENT SYSTEM

MODEL CD-MPX870W

CD-MPX870W Mini Component System consisting of CD-MPX870W (main unit) and CP-MPX870 (speaker system).

• In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.

COMPACT disc DIGITAL AUDIO

MP3 with NAVIGATION

Plays Windows Media™

CD-R/RW Playable

5-DISC CHANGER

CONTENTS

CHAPTER 1. GENERAL DESCRIPTION
[1] Precaution for using lead-free solder 1-1
[2] Safety precaution for service manual 1-2
[3] Voltage selection 1-2
[4] AC power supply cord AC plug adaptor 1-2
[5] Specifications 1-3
[6] Names of parts 1-4

CHAPTER 2. ADJUSTMENTS
[1] Mechanism section 2-1
[2] Test mode 2-2
[3] CD section 2-4
[4] CD Changer mechanism section 2-5

CHAPTER 3. MECHANISM BLOCKS
[1] Caution on disassembly 3-1
[2] Removing and reinstalling the main parts 3-4

CHAPTER 4. DIAGRAMS
[1] CD Block diagrams 4-1
[2] Main Block diagrams 4-2

CHAPTER 5. CIRCUIT DESCRIPTION
[1] Waveforms of CD circuit 5-1
[2] Voltage 5-2

CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT
[1] Notes on schematic diagram 6-1
[2] Types of transistor and LED 6-1
[3] Schematic diagram 6-2
[4] Wiring side of PWB 6-10

CHAPTER 7. FLOWCHART
[1] Troubleshooting 7-1

CHAPTER 8. OTHERS
[1] Function table of IC 8-1
[2] FL Display 8-8

Parts Guide

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

CHAPTER 1: GENERAL DESCRIPTION

[1] PRECAUTIONS FOR USING LEAD-FREE SOLDER

1. Employing lead-free solder

"MAIN, POWER, DISPLAY, GAME INPUT, CD SERVO, LED, CD MOTOR (PWB ONLY), CD CHANGER MOTOR (PWB ONLY) PWB" of this model employs lead-free solder.The LF symbol indicates lead-free solder, and is attached on the PWB and service manuals.The alphabetical character following LF shows the type of lead-free solder.

Example:

Sn-Ag-Cu Indicates lead-free solder of tin,silver and copper.

2. Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.
As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, were commend you to use a dedicated soldring bit,if you are not familiar with how to obtain lead-free wire solder or soldering bit,contact our service station or service branch in your area.

3. Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.
Lead-free solder contains more tin, and the end of the soldering bit may be easily corrected. Make sure to turn on and off the power of the bit as required.
If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder.Clean the bit after every use of it.
When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.
Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

Ref No.	Parts No.	Description
PWB-A	92LPWB6570MANS	MAIN (A1), POWER (A2)
PWB-B	92LPWB6570DPLS	DISPLAY (B1), GAME INPUT (B2)
PWB-C	92LPWB6514CDUS	CD SERVO
PWB-D	92LPWB6274LEDS	LED
PWB-E	QPWBF0027AWZZ	CD MOTOR (PWB ONLY)
PWB-F	QPWBF1055AWZZ	CD CHANGER MOTOR (PWB ONLY)

[2] SAFETY PRECAUTION FOR SERVICE MANUAL

Precaution to be taken when replacing and servicing the Laser Pickup.

WARNINGS

THE AEL (ACCESSIBLE EMISSION LEVEL) OF THE LASER POWER OUTPUT IS LESS THAN CLASS 1 BUT THE LASER COMPONENT IS CAPABLE OF EMITTING RADIATION EXCEEDING THE LIMIT FOR CLASS 1. THEREFORE IT IS IMPORTANT THAT THE FOLLOWING PRECAUTIONS ARE OBSERVED DURING SERVICING TO PROTECT YOUR EYES AGAINST EXPOSURE TO THE LASER BEAM.

1-WHEN THE CABINET IS REMOVED,THE POWER IS TURNED ON WITHOUT A COMPACT DISC IN POSITION AND THE PICKUP IS ON THE OUTER EDGE THE LASER WILL LIGHT FOR SEVERAL SECONDS TO DETECT A DISC. DO NOT LOOK INTO THE PICKUP LENS.

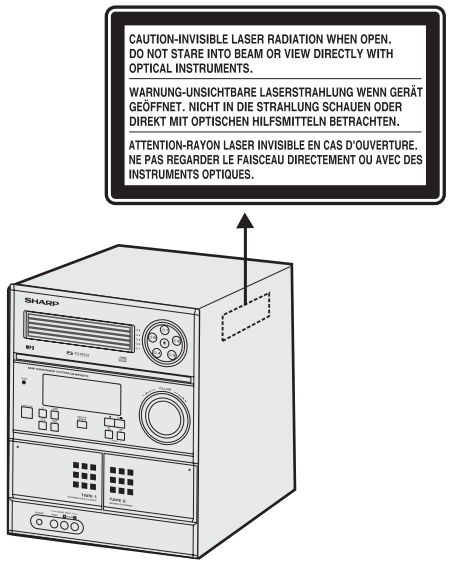
2-THE LASER POWER OUTPUT OF THE PICKUP UNIT AND REPLACEMENT SERVICE PARTS ARE ALL FACTORY PRESET BEFORE SHIPMENT.
DO NOT ATTEMPT TO READJUST THE LASER PICKUP UNIT DURING REPLACEMENT OR SERVICING.

3-UNDER NO CIRCUMSTANCES STARE INTO THE PICKUP LENS AT ANY TIME.

4-CAUTION-USE OF CONTROLS OR ADJUSTMENTS, OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

This product is classified as a CLASS 1 LASER PRODUCT.

Laser Diode Properties
Material: GaAlAs
Wavelength: 795 nm
Emission Duration: continuous
Laser Output: max. 0.6 mW


CAUTION-INVISIBLE LASER RADIATION WHEN OPEN.
DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.
WARNUNG-UNSICHTBARE LASERSTRAHLUNG WENN GERÄT GEÖFFNET. NICHT IN DIE STRAHLUNG SCHAUEN ODER DIREKT MIT OPTISCHEN HILFSMITTELN BETRACHTEN.
ATTENTION-RAYON LASER INVISIBLE EN CAS D'OUVERTURE. NE PAS REGARDER LE FAISCEAU DIRECTEMENT OU AVEC DES INSTRUMENTS OPTIQUES.
SHARP

Note for users in Australia:
Copyright may exist in material you wish to record. Copying or broadcasting such material without permission of the relevant in licenses or owners of the copyright is prohibited by law. SHARP is not in a position to authorise the copying or broadcasting of copyright materials and nothing in this OPERATION MANUAL should be implied as giving that authority.

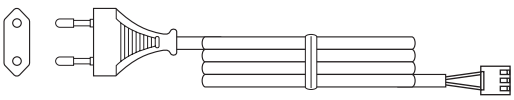
For other countries:
Audio-visual material may consist of copyrighted works which must not be recorded without the authority of the owner of the copyright. Please refer to the relevant laws in your country.

[3] VOLTAGE SELECTION

Before operating the unit on mains, check the preset voltage. If the voltage is different from your local voltage, adjust the voltage as follows. Turn the selector with a screwdriver until the appropriate voltage number appears in the window (110V, 127V, 220V or 230V - 240V AC).

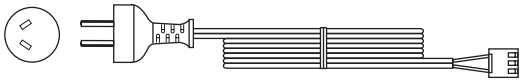
[4] AC POWER SUPPLY CORD AND AC PLUG ADAPTOR

QACCEA001AW00

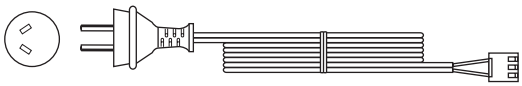


QPLGA0004AWZZ

QACCZ0013AW00



QACCL0008AW00



[5] SPECIFICATIONS

FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

As part of our policy of continuous improvement, SHARP reserves the right to make design and specifcation changes for product improvement without prior notice. The performance specifcation figures indicated are nominal values of production units .There maybe some deviations from these values in individual units.

■ General

Power source	AC 110/127/220/230-240 V, 50/60Hz
Power consumption	120 W
Dimensions	Width: 10 - 1/4" (260 mm) Height: 13" (330 mm) Depth: 12 - 7/8" (323 mm)
Weight	18.74 lbs. (8.5 kg)

■ Amplifier

Output power	MPO: 600 W (300 W + 300 W) (10% T.H.D.) RMS: 300 W (150 W + 150 W) (10% T.H.D.) RMS: 240 W (120 W + 120 W) (0.9% T.H.D.)
Output terminals	Speakers: 6 ohms Headphones: 16 - 50 ohms (recommended: 32 ohms) Video output: 1Vp-p
Input terminals	Game/ Auxiliary (audio signal): 500 mV/ 47 k ohms Game/Video: 1Vp-p

■ CD player

Type	5-disc multi-play compact disc player
Signal readout	Non-contact, 3-beam semiconductor laser pickup
D/A converter	1-bit D/A converter
Frequency response	20 - 20,000 Hz
Dynamic range	90 dB (1 kHz)

■ Tuner

Frequency range	FM: 88.0 - 108.0 MHz AM: 531 - 1602 kHz

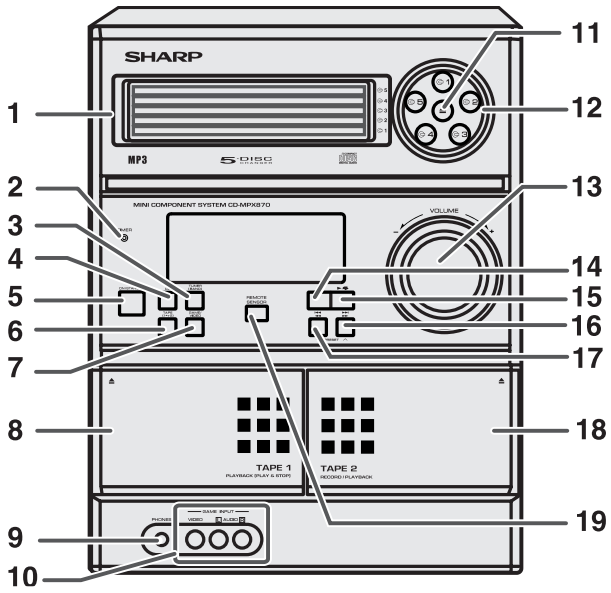
■ Cassette deck

Frequency response	50 - 14,000 Hz (normal tape)
Signal/noise ratio	55 dB (TAPE 1, playback) 50 dB (TAPE 2, recording/playback)
Wow and flutter	0.3 % (WRMS)

■ Front Speaker

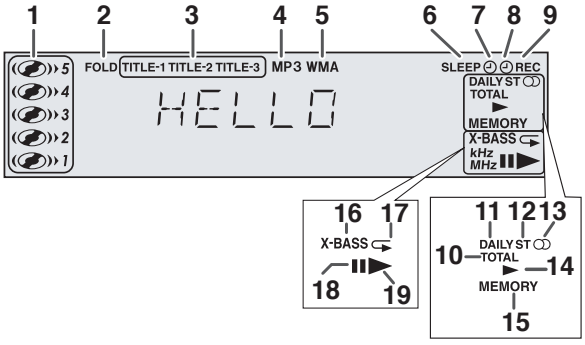
Type	3-way type speaker system Super tweeter 2" (5 cm) tweeter 6 - 5/16" (16 cm) woofer
Maximum input power	300 W
Rated input power	150 W
Impedance	6 ohms
Dimensions	Width: 7 - 7/8" (200 mm) Height: 13" (330 mm) Depth: 9 - 1/8" (231 mm)
Weight	7.3 lbs. (3.3 kg) /each

[6] NAMES OF PARTS



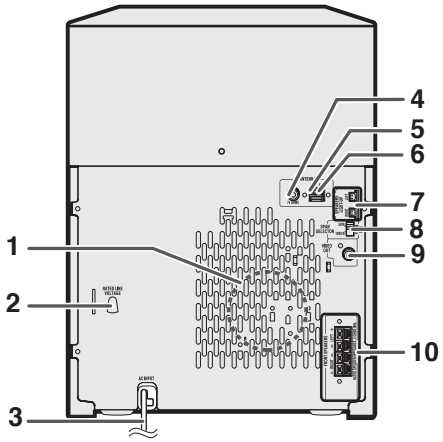
■ Front panel

1. Disc Trays
2. Timer Indicator
3. Tuner (Band) Button
4. CD Button
5. ON/STAND-BY Button
6. Tape (1→ 2) Button
7. Game/Video Button
8. Tape 1 Cassette Compartment
9. Headphone Jack
10. Game/ Video Input Jacks
11. Disc Tray Open/Close Button
12. Disc Number Select Buttons
13. Volume Control
14. CD or Tape Stop Button
15. CD Play or Repeat, Tape Play Button
16. CD Track Up or Fast Forward, Tape 2 Fast Forward, Tuner Preset Up, Time Up Button
17. CD Track Down or Fast Reverse, Tape 2 Rewind, Tuner Preset Down,Time Down Button
18. Tape 2 Cassette Compartment
19. Remote Sensor



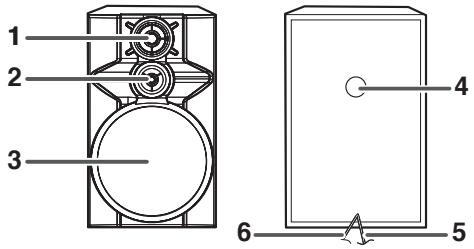
■ Display

1. Disc Number Indicators
2. MP3/WMA Folder Indicator
3. MP3/WMA Title Indicators
4. MP3 Indicator
5. WMA Indicator
6. Sleep Indicator
7. Timer Play Indicator
8. Timer Recording Indicator
9. Tape 2 Record Indicator
10. MP3/WMA Total Indicator
11. Daily Timer Indicator
12. FM Stereo Mode Indicator
13. FM Stereo Receiving Indicator
14. Tape Play Indicator
15. Memory Indicator
16. Extra Bass Indicator
17. Disc Repeat Play Indicator
18. Disc Pause Indicator
19. Disc Play Indicator



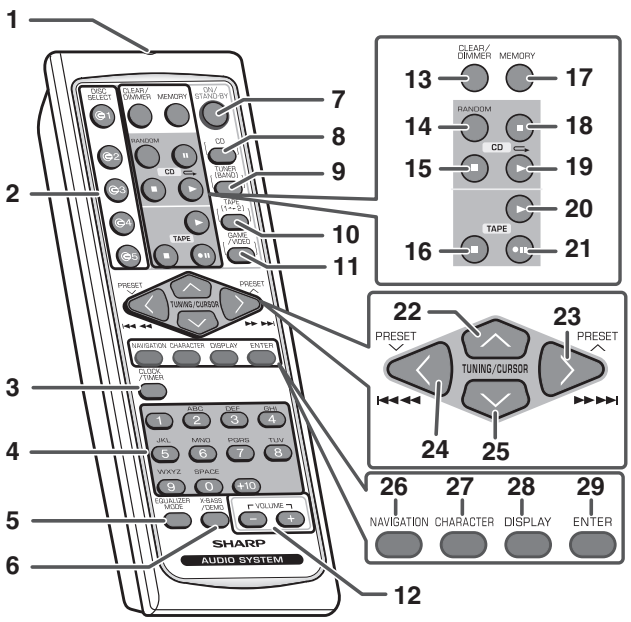
■ Rear panel

1. Cooling Fan
2. AC Voltage Selector
3. AC Power Cord
4. FM 75 Ohms Antenna Jack
5. AM Antenna Ground Terminal
6. AM Loop Antenna Terminal
7. Speaker Light-up Jacks
8. Span Selector Switch
9. Video out Jack
10. Front Speaker Terminals



■ Front Speaker

1. Tweeter
2. Super Tweeter
3. Woofer
4. Bass Reflex Duct
5. Speaker Wire
6. Speaker Light-Up Wire



■ Remote control

1. Remote Control Transmitter
2. Disc Number Select Buttons
3. Clock/Timer Button
4. Character Input/Disc Direct Search Buttons
5. Equalizer Mode Select Button
6. Extra Bass/Demo Button
7. ON/STAND-BY Button
8. CD Button
9. Tuner (Band) Button
10. Tape (1 ↔ 2) Button
11. Game/Video Button
12. Volume Up and Down Buttons
13. Disc Clear/Dimmer Button
14. Disc Random Button
15. Disc Stop Button
16. Tape Stop Button
17. Memory Button
18. Disc Pause Button
19. Disc Play or Repeat Button
20. Tape Play Button
21. Tape 2 Record Pause Button
22. Tuning Up, Cursor Up Button
23. Disc Track Up or Fast Forward, Tape 2 Fast Forward, Tuner Preset Up, Time Up, Cursor Right Button
24. Disc Track Down or Fast Reverse, Tape 2 Rewind, Tuner Preset Down, Time Down, Cursor Left Button
25. Tuning Down, Cursor Down Button
26. MP3/WMA Navigation Mode Select Button
27. Character Button
28. MP3/WMA Display Button
29. Enter Button

CHAPTER 2. ADJUSTMENTS

[1] Mechanism section

- Driving Force Check

Torque Meter	Specified Value
Play: TW-2111	Tape 1: Over 80 g Tape 2: Over 80 g

- Torque Check

Torque Meter	Specified Value	
	Tape 1	Tape 2
Play: TW-2111	30 to 80 g.cm	30 to 80 g.cm
Fast forward: TW-2231	—	70 to 180 g.cm
	—	70 to 180 g.cm

- Tape Speed

	Test Tape	Adjusting Point	Specified Value	Instrument Connection
Normal speed	MTT-111	Variable Resistor in motor.	3,000 ± 30 Hz Speaker	Speaker Terminal (Load resistance: 6 ohms)

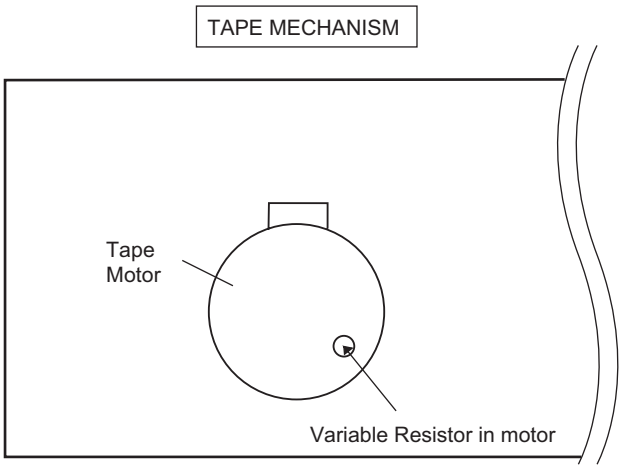
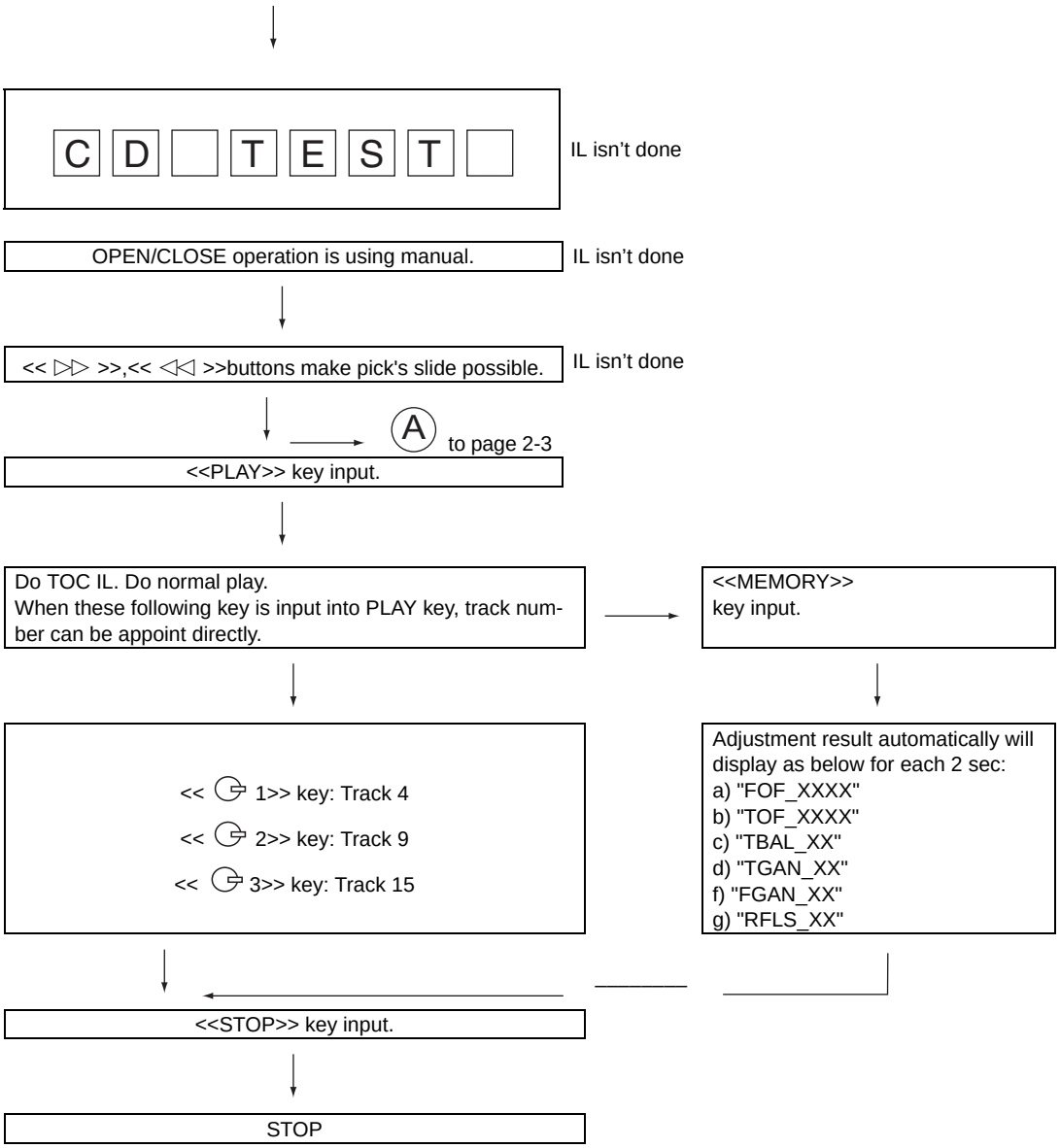


Figure 1

[2] Test mode

- **Setting the test mode**

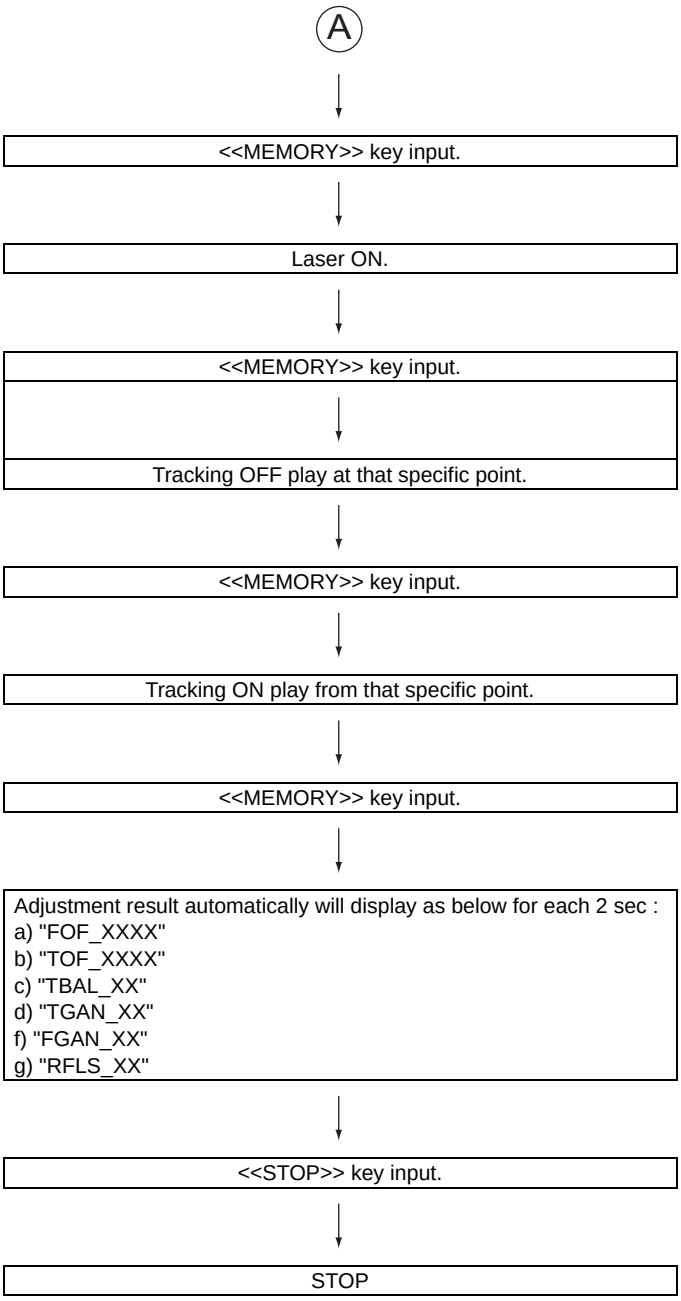
During stand-by mode, press GAME/VIDEO button while pressing down the ▲ button and ◀◀ I◀◀ button. then, press the CD button to enter the test mode.



explanation:

a) Focus off set	= "FOF_XXXX"
b)Tracking off set	= "TOF_XXXX"
c)Tracking balance	= "TBAL_XX"
d)Tracking Gain	= "TGAN_XX"
f) Focus Gain	= "FGAN_XX"
g) RF level shift	= "RFLS_XX"

VOL — Last memory
P.GEQ — FLAT
X-BASS — OFF
To cancel : Power OFF



Sliding the PICKUP with<< ▷▷ >>, << ◁◁ >> button must only be in STOP mode.

explanation:

a) Focus off set = "FOF_XXXX"
b)Tracking off set = "TOF_XXXX"
c)Tracking balance = "TBAL_XX"
d)Tracking Gain = "TGAN_XX"
f) Focus Gain = "FGAN_XX"
g) RF level shift = "RFLS_XX"

VOL — Last memory
P.GEQ — FLAT
X-BASS — OFF
To cancel : Power OFF

[3] CD section

CD Error code description

Error	Explanation
10*	CAM error. Can't detect CAM switch when CAM is moving.
11*	When it detect cam operation error during initialize process.
20*	TRAY error. Can't detect TRAY switch when TRAY is moving.
21*	When it detect TRAY operation error during initialize process.
31	When it change to CD function, DSP cannot read initial data.

* 'CHECKING'

If Error is detected, 'CHECKING' will be displayed instead of 'ER-CD**'. 'ER-CD**' display will only be displayed when error had been detected for the 5th times.

Standard Specification of Stereo System Error Message Display Contents

Error Contents		Display	Notes
CD	CD Changer Mechanism Error.	'ER-CD**' (*)	10: CAM SW Detection NG during normal operation. 11: CAM SW Detection NG during initialize process. 20:TRAY SW Detection NG during normal operation. 21:TRAY SW Detection NG during initialize process.
	CD DSP Communication Error.	'ER-CD31'	DSP COMMUNICATION ERROR.
	Focus Not Match/IL Time Over.	'NO DISC'	
TUNER	PLL Unlock.	FM 87.5 MHz	PLL Unlock.

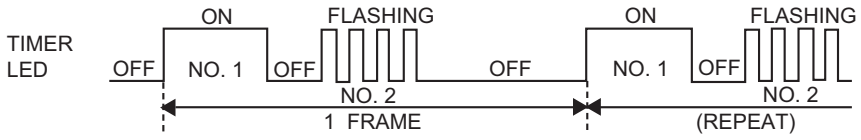
(*) CHECKING:

If CD changer mechanism error is detected, 'CHECKING' will be display instead of 'ER-CD**'. 'ER-CD**' display will only be display when error had been detected for the 5th times.

Speaker abnormal detection and +B PROTECTION display

In case speaker abnormal detection or +B PROTECTION had occurred, the unit will automatically enter to stand - by mode and Timer indicator will be flashing as below.

Example : In case of speaker abnormal



NO.1 : +B Protection
NO.2 : Speaker abnormal

+B PROTECTION is condition when irregular process occur on power supply line.

BEFORE TRANSPORTING THE UNIT

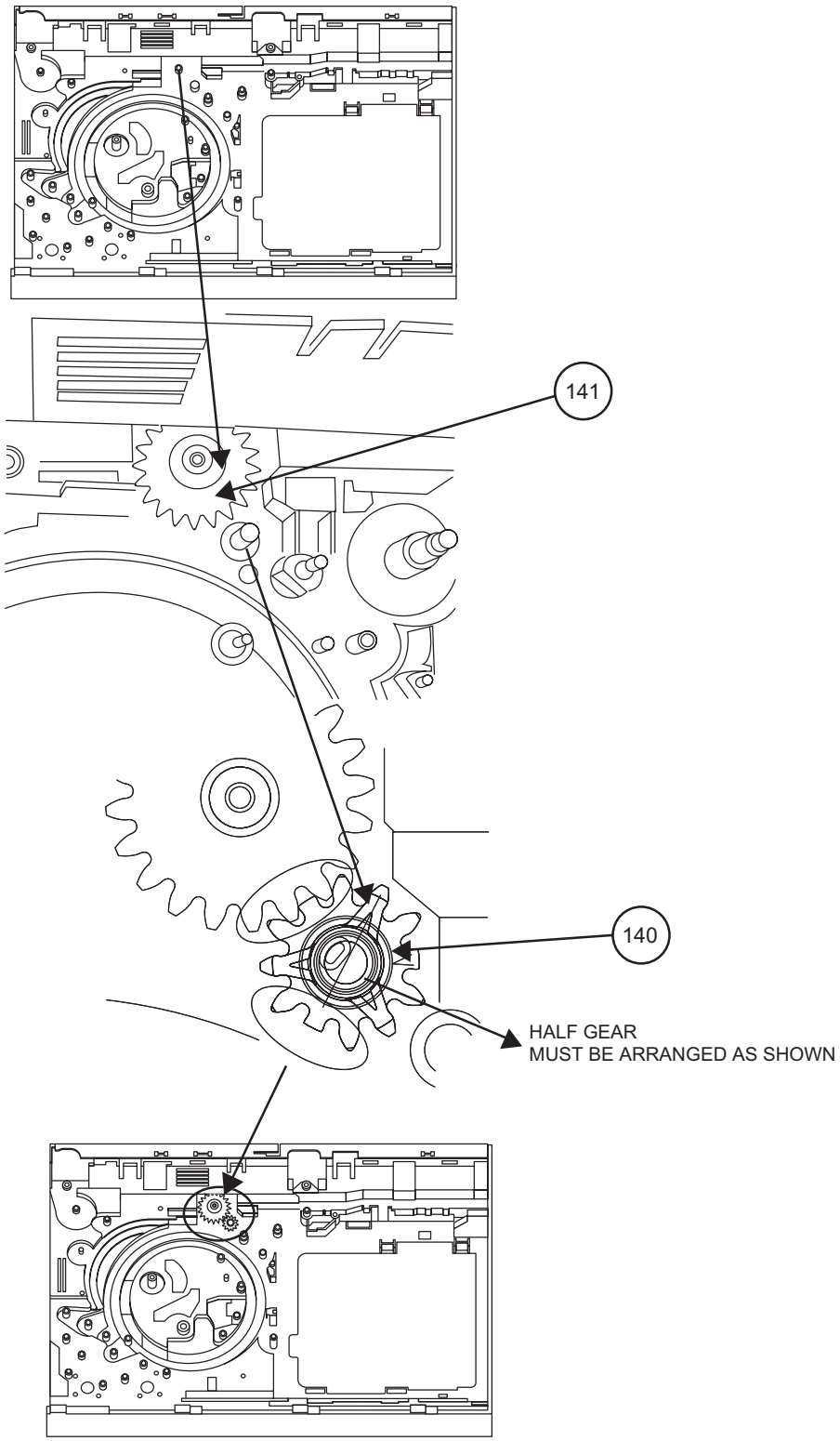
The following process need to be taken after set tapering/parts replacement.

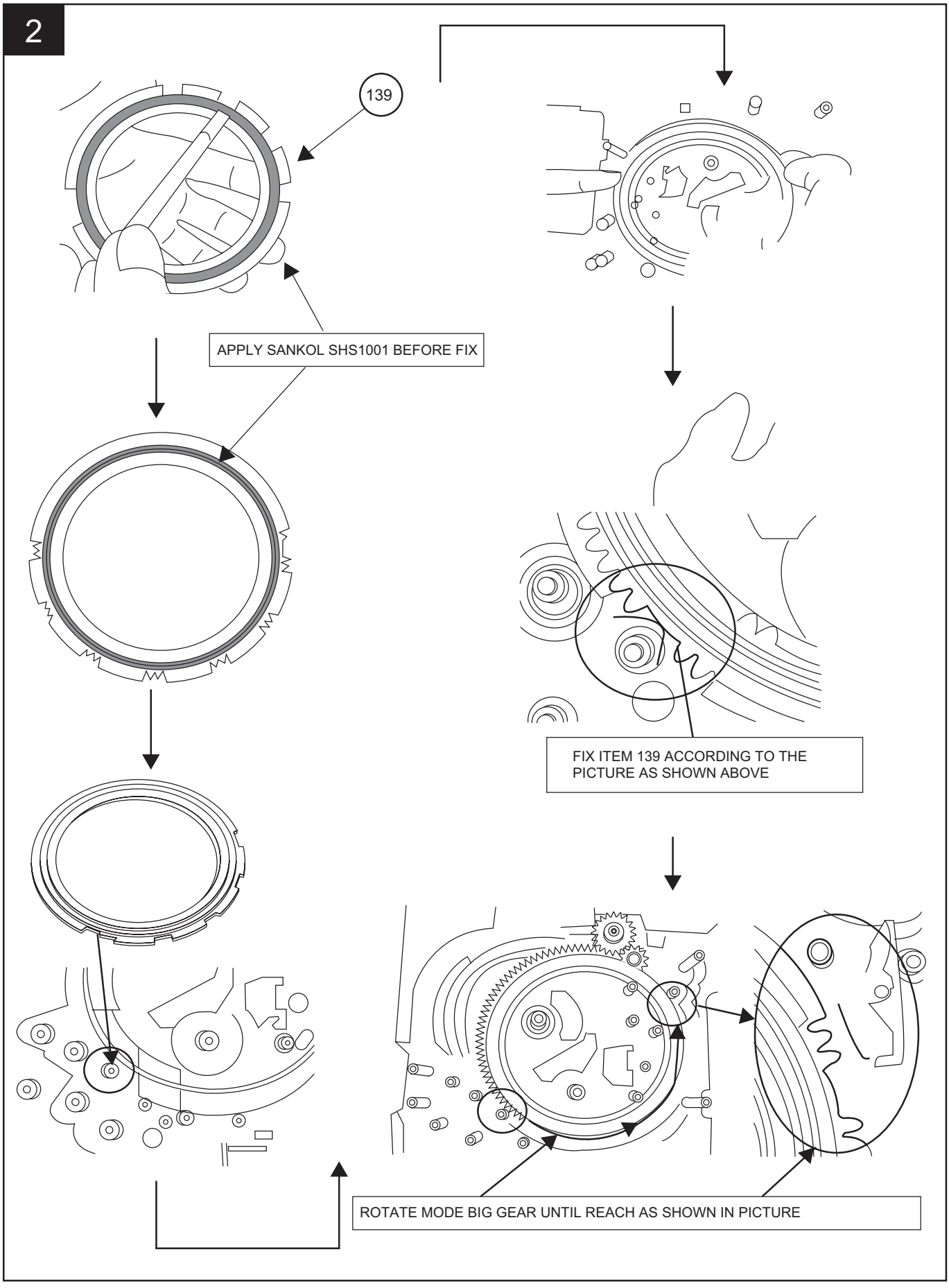
1. Press the ON/STAND-BY button to enter stand-by mode.
2. While pressing down the ⏏ button and the ◀◀ I◀◀ button, press the GAME/VIDEO button. The Micro Computer version number will be displayed as "CM*****".
3. Press ⏏ button until "WAIT"→ "FINISHED" appears.
4. Unplug the AC cord and the unit is ready for transporting.

[4] CD Changer mechanism section

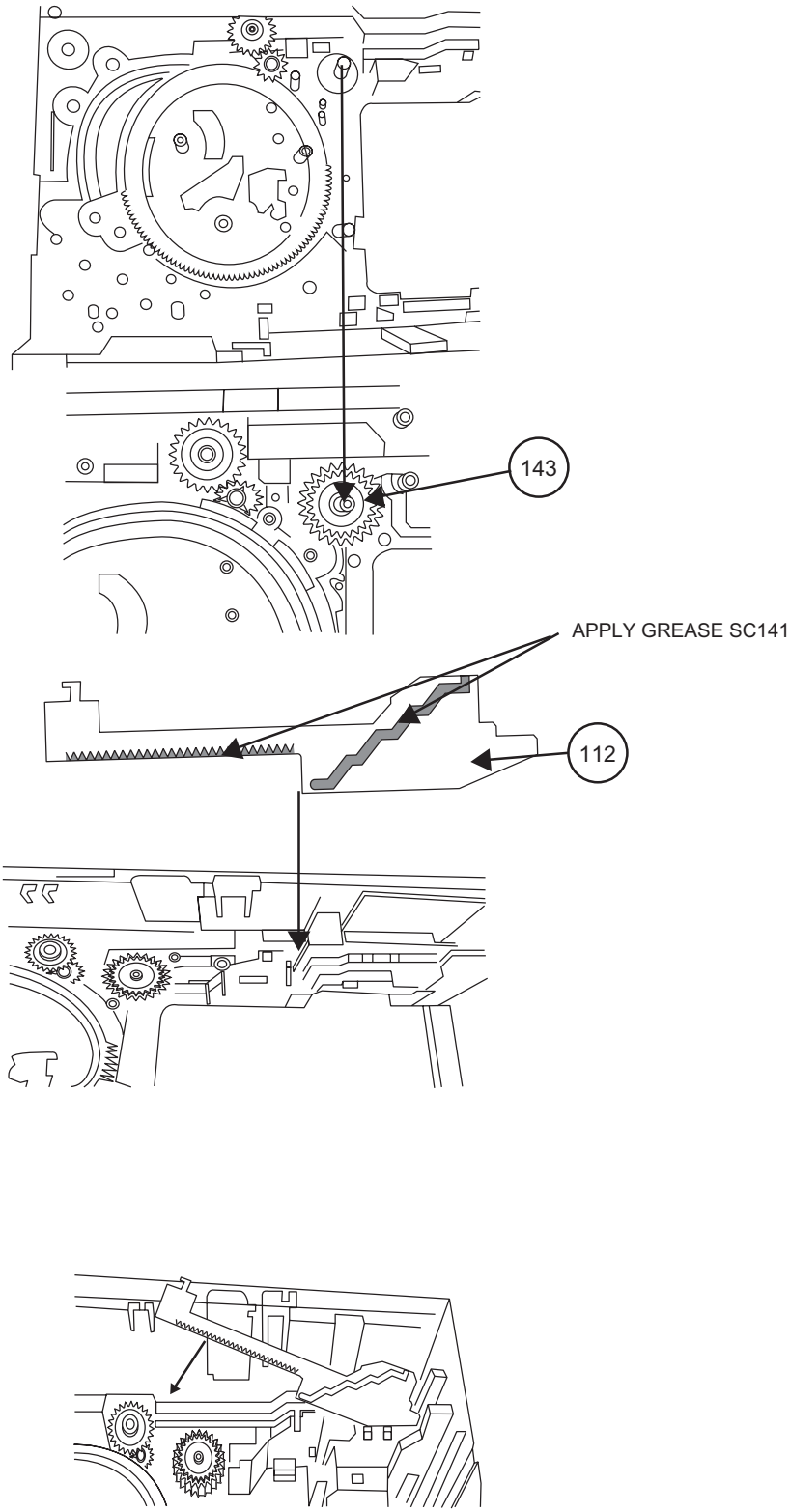
- All numbers in the drawing correspond to those in parts guide (CHANGER MECHANISM PARTS).

1

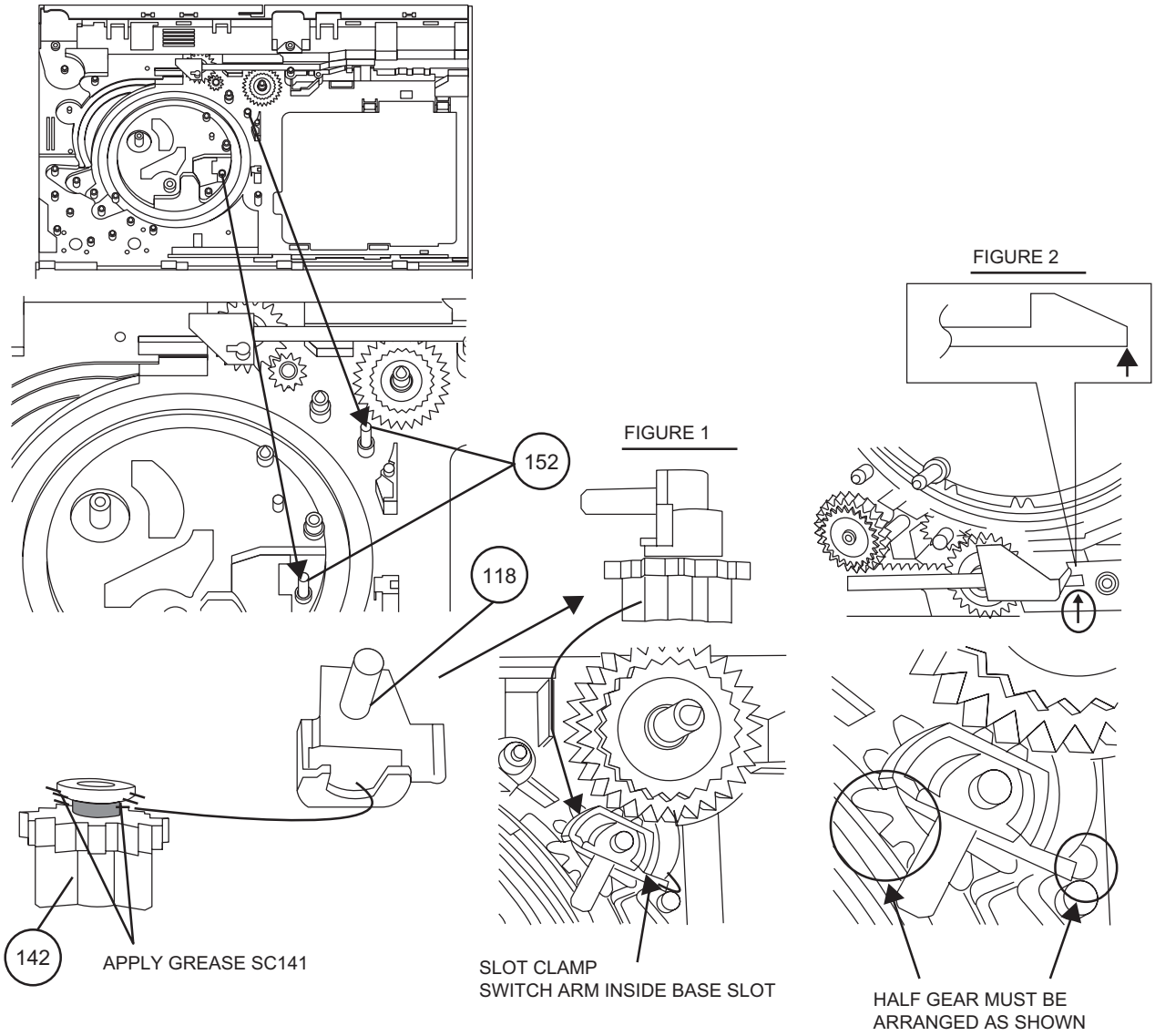



2
139
APPLY SANKOL SHS1001 BEFORE FIX
FIX ITEM 139 ACCORDING TO THE PICTURE AS SHOWN ABOVE
ROTATE MODE BIG GEAR UNTIL REACH AS SHOWN IN PICTURE

3


143
APPLY GREASE SC141
112
PULL THE LEVER UNITIL
REACH THE ARROW MARK

4


152
118
142
APPLY GREASE SC141
FIGURE 1
SLOT CLAMP
SWITCH ARM INSIDE BASE SLOT
FIGURE 2
HALF GEAR MUST BE
ARRANGED AS SHOWN

5

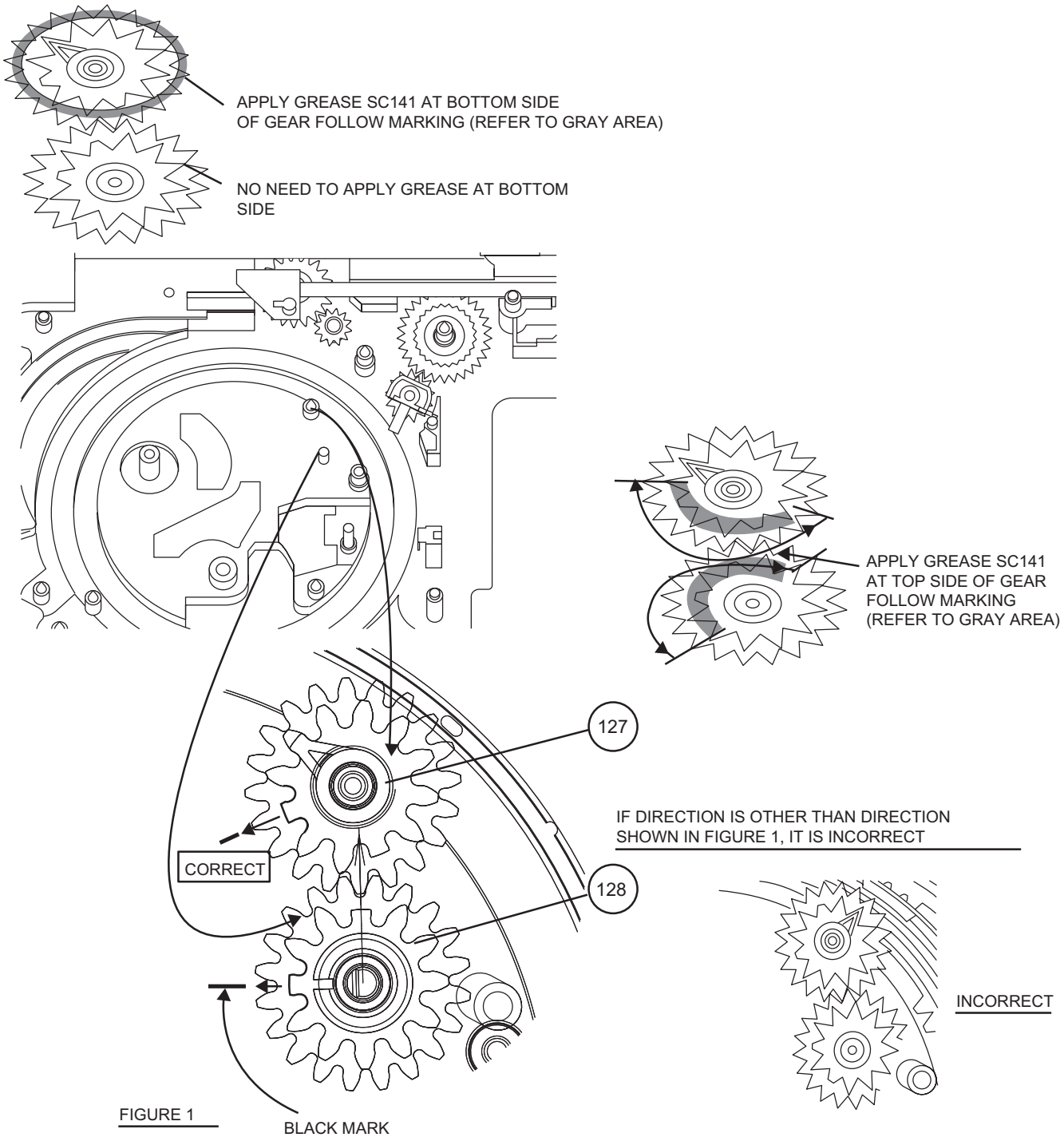
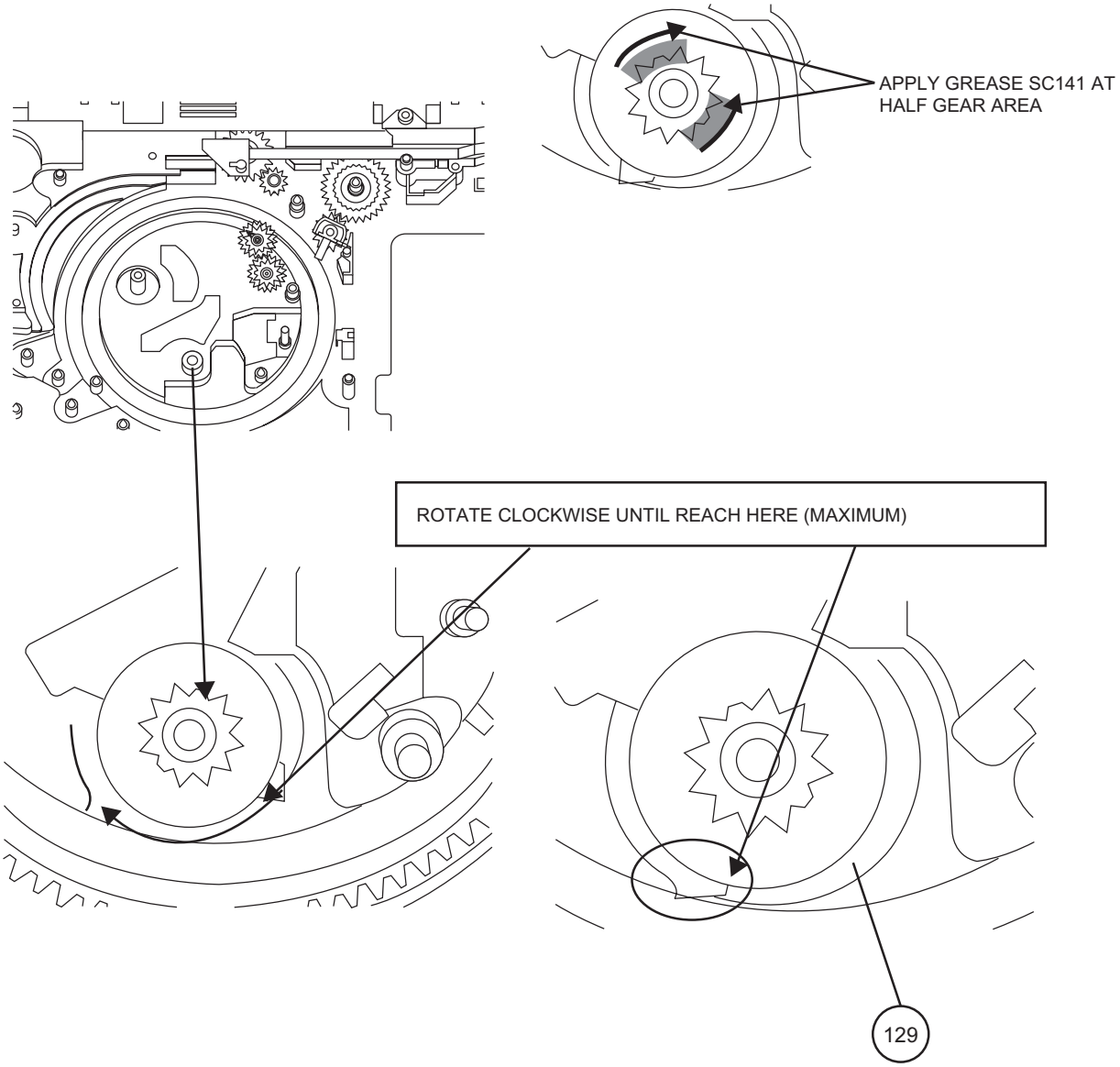
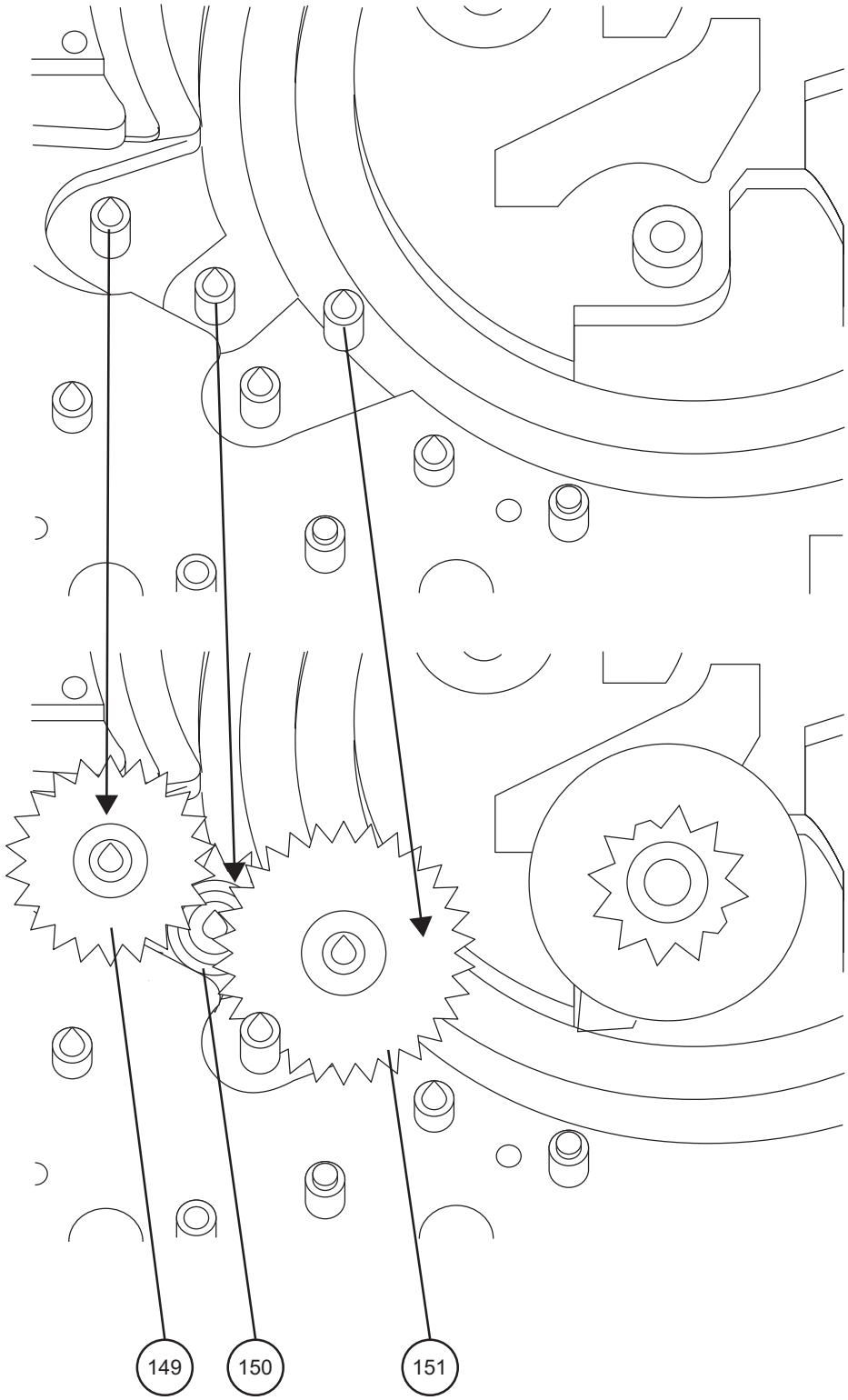

APPLY GREASE SC141 AT BOTTOM SIDE
OF GEAR FOLLOW MARKING (REFER TO GRAY AREA)
NO NEED TO APPLY GREASE AT BOTTOM
SIDE
APPLY GREASE SC141
AT TOP SIDE OF GEAR
FOLLOW MARKING
(REFER TO GRAY AREA)
127
128
CORRECT
IF DIRECTION IS OTHER THAN DIRECTION
SHOWN IN FIGURE 1, IT IS INCORRECT
INCORRECT
BLACK MARK

FIGURE 1

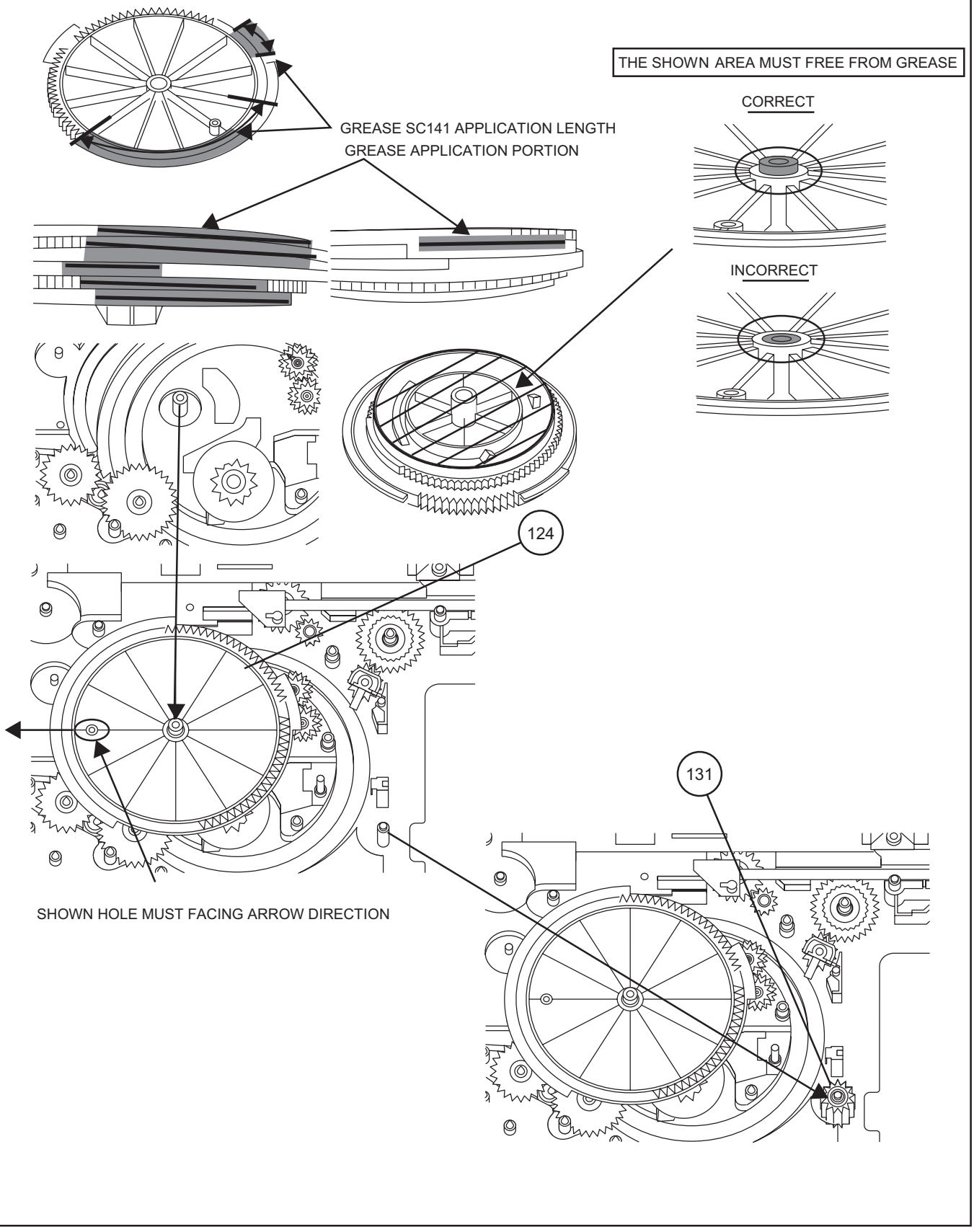
6


APPLY GREASE SC141 AT
HALF GEAR AREA
ROTATE CLOCKWISE UNTIL REACH HERE (MAXIMUM)
129

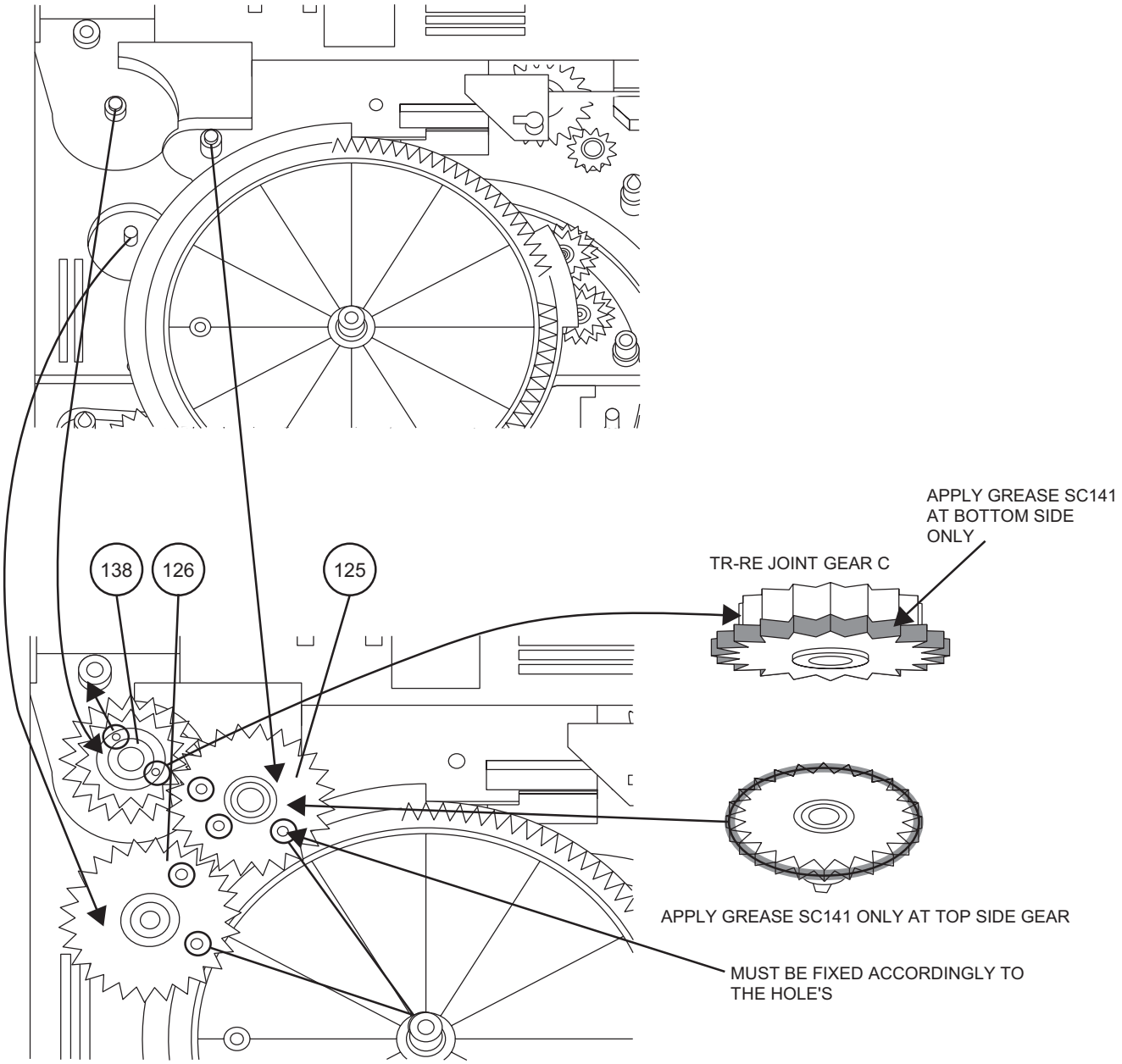
7



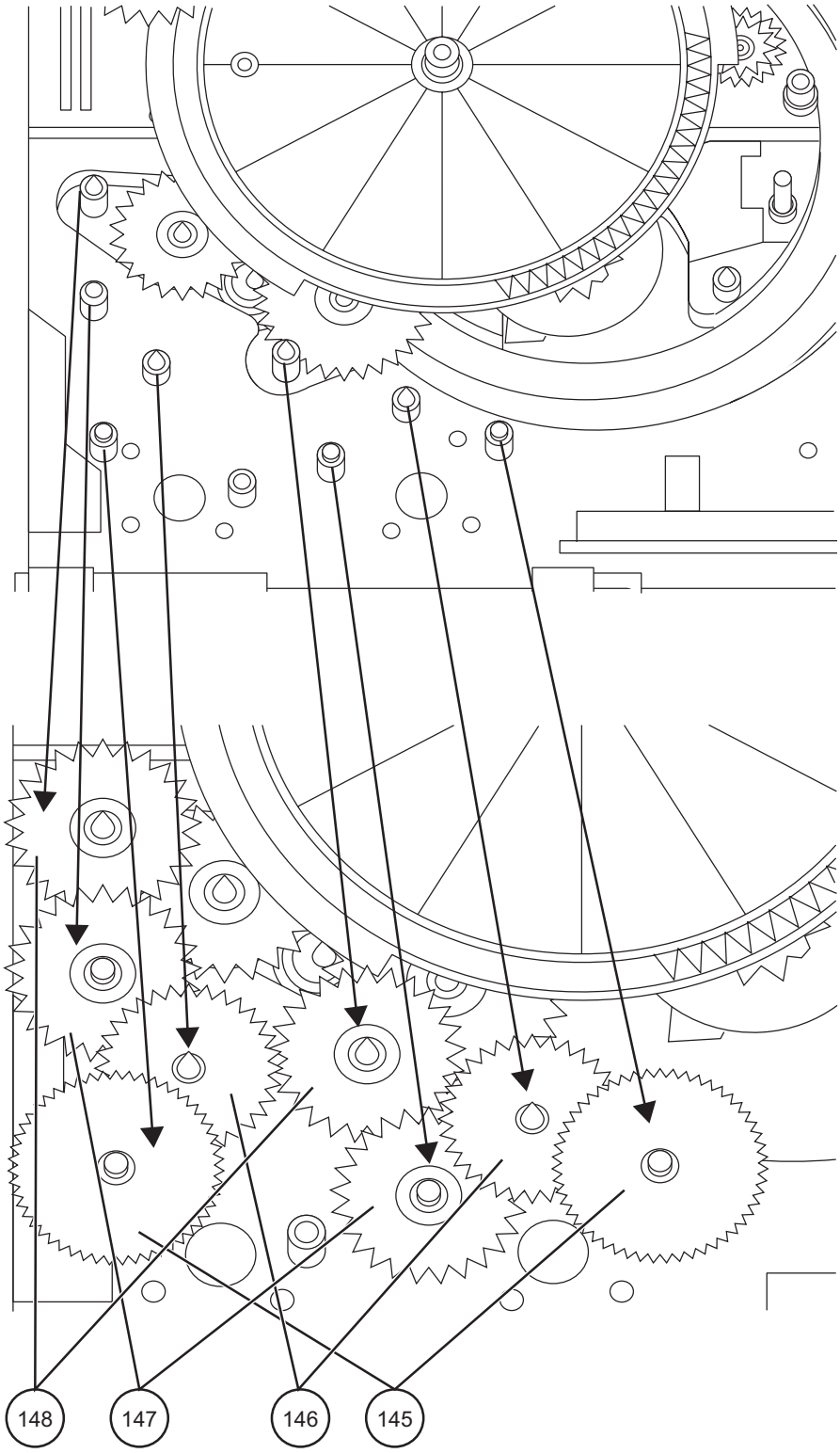
8


THE SHOWN AREA MUST FREE FROM GREASE
CORRECT
INCORRECT
GREASE SC141 APPLICATION LENGTH
GREASE APPLICATION PORTION
124
131
SHOWN HOLE MUST FACING ARROW DIRECTION

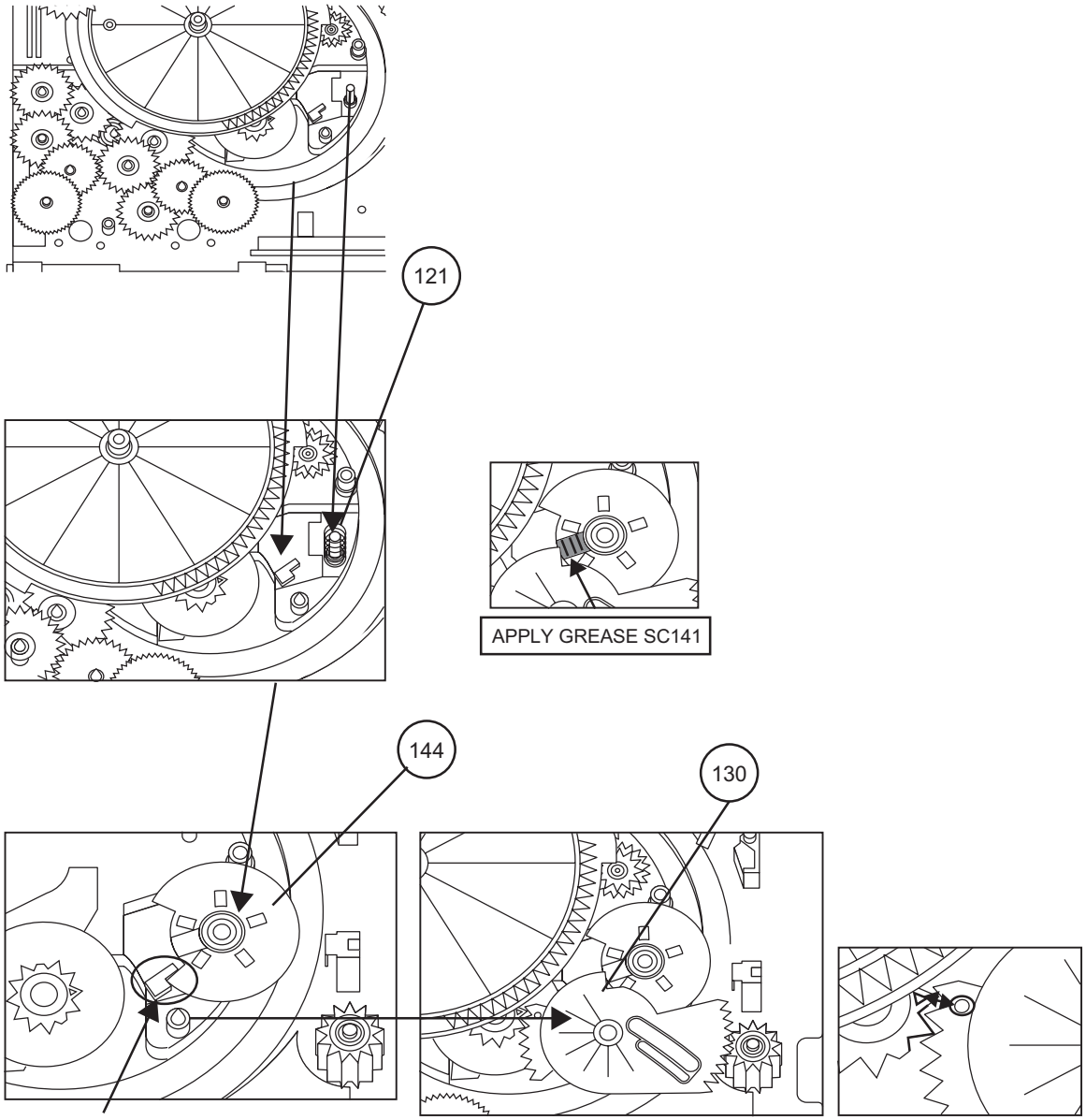
9


APPLY GREASE SC141
AT BOTTOM SIDE
ONLY
TR-RE JOINT GEAR C
138
126
125
APPLY GREASE SC141 ONLY AT TOP SIDE GEAR
MUST BE FIXED ACCORDINGLY TO
THE HOLE'S

10

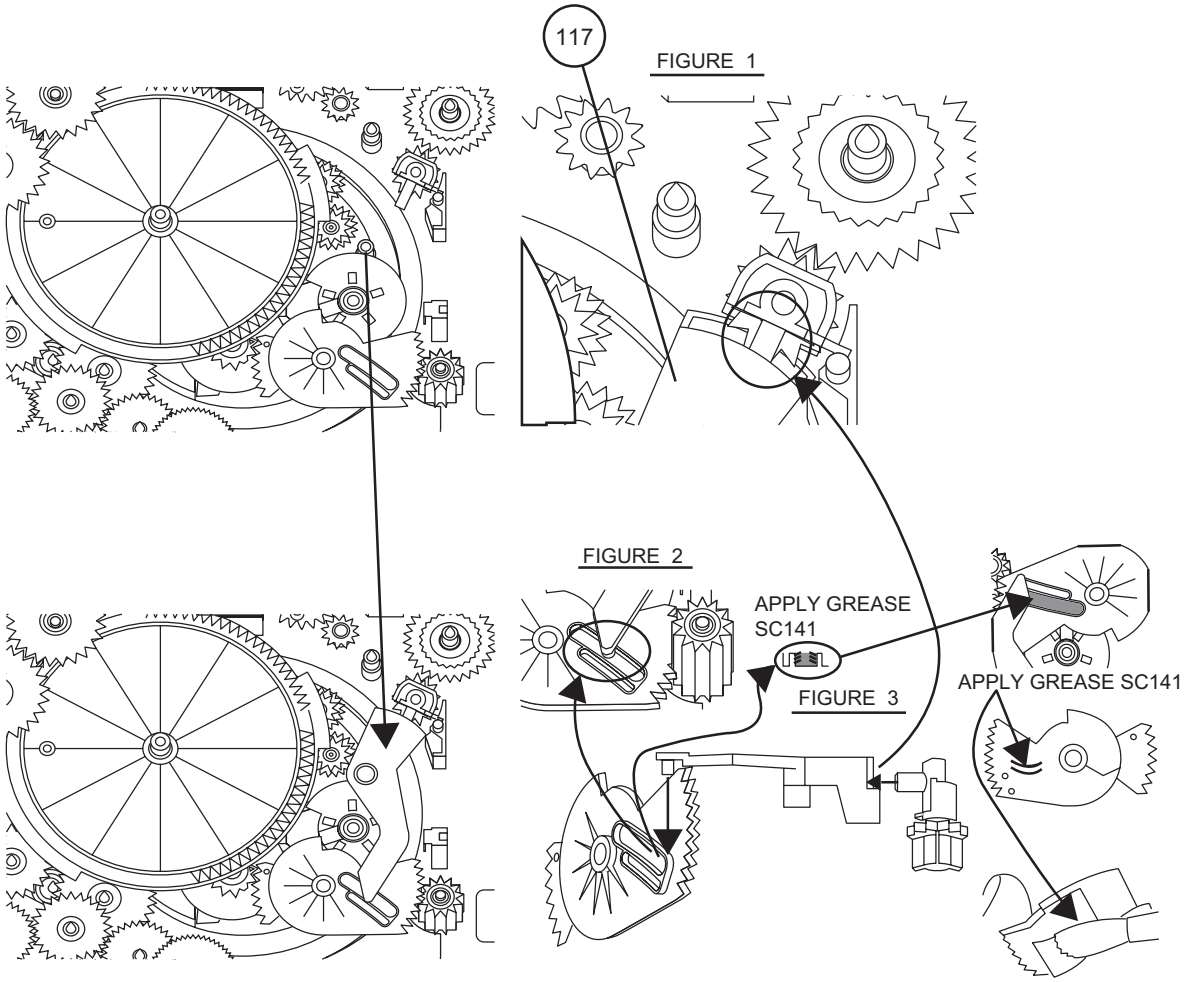


11

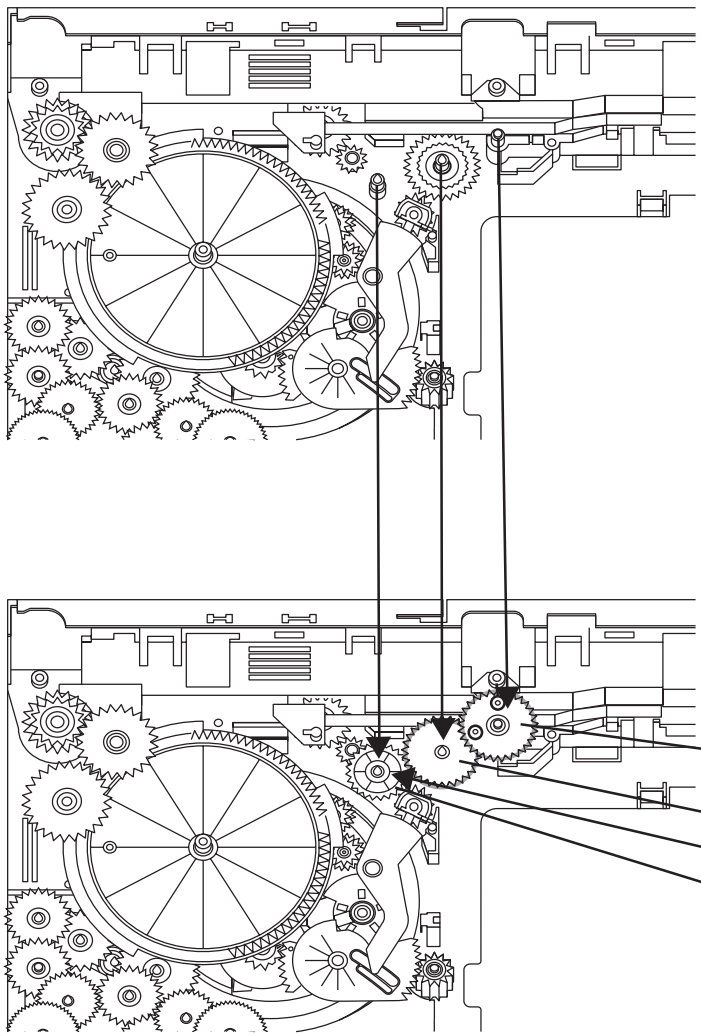


WHEN FIXING ITEM 144 MUST FOLLOW AS SHOWN

12


117
FIGURE 1
FIGURE 2
APPLY GREASE
SC141
FIGURE 3
APPLY GREASE SC141

13



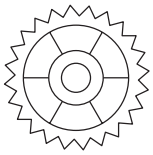
ITEM 133 , 134 MUST APPLY GREASE SC141
ON TOP SIDE GEAR ONLY

134

133

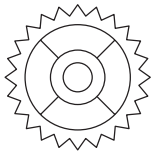
132

GEAR 112
CORRECT



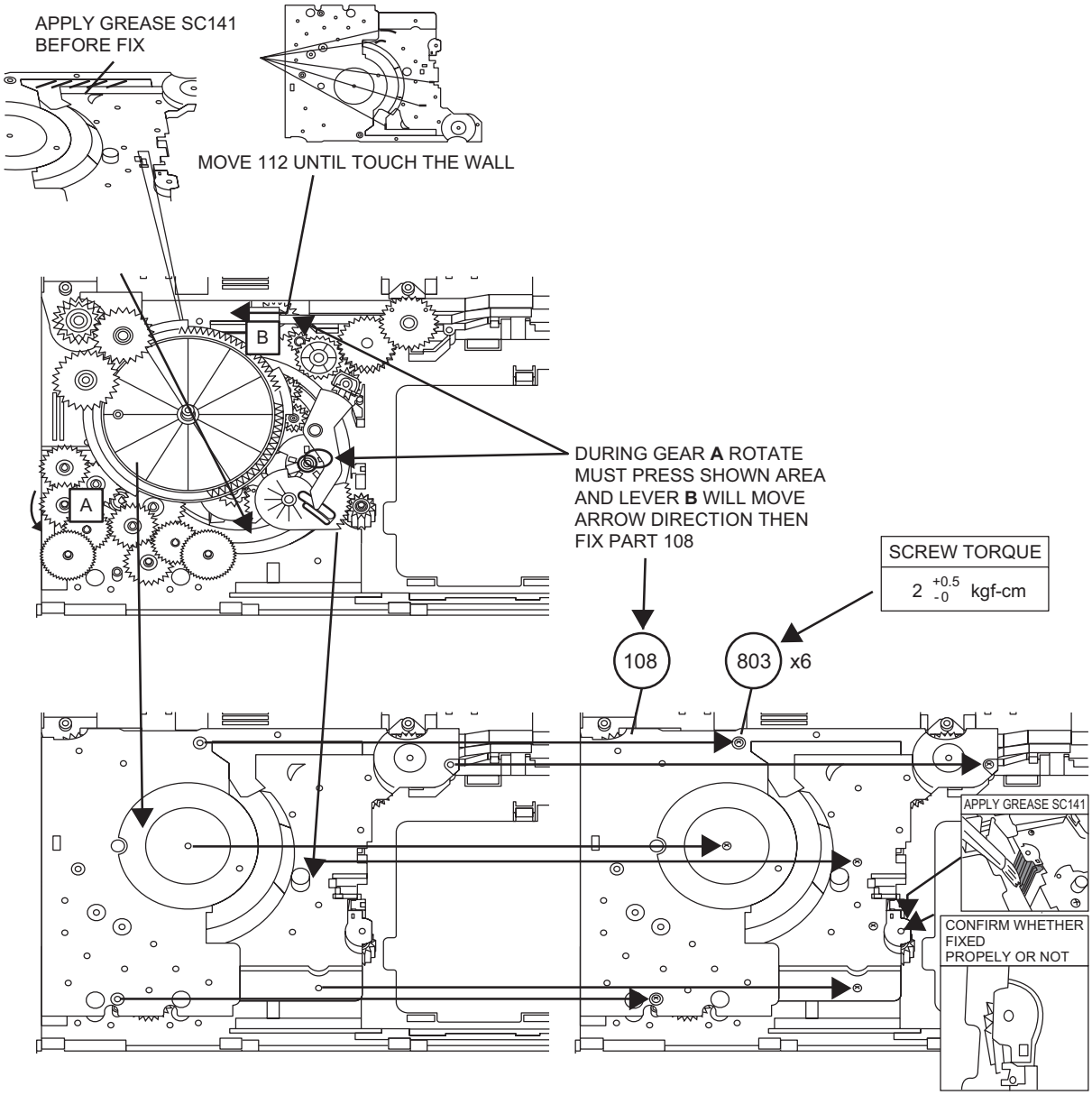
TOP VIEW AFTER
BEING ASSEMBLED

GEAR 112
INCORRECT

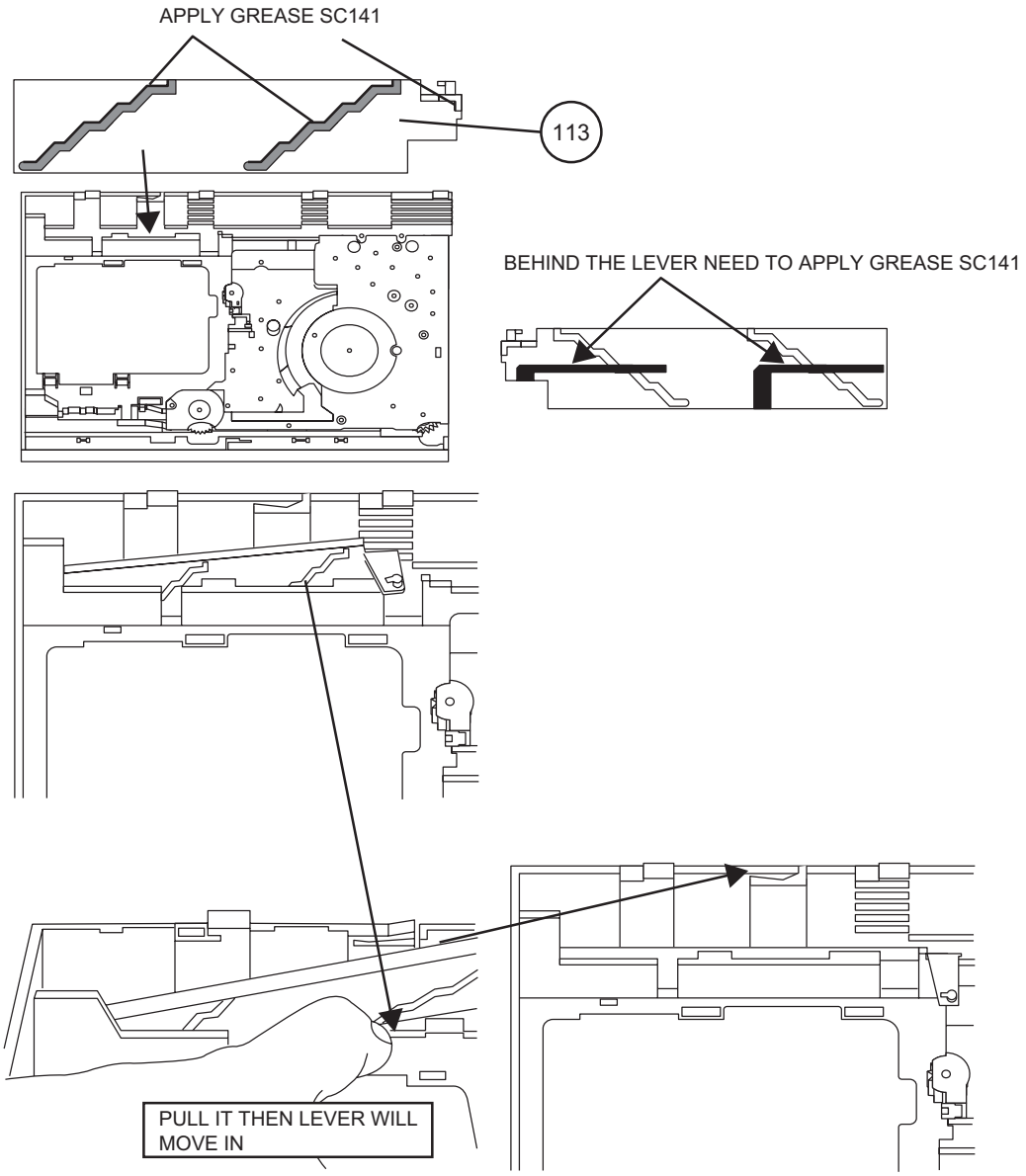


IT IS INCORRECT TO
FIX IT IN REVERSED
DIRECTION

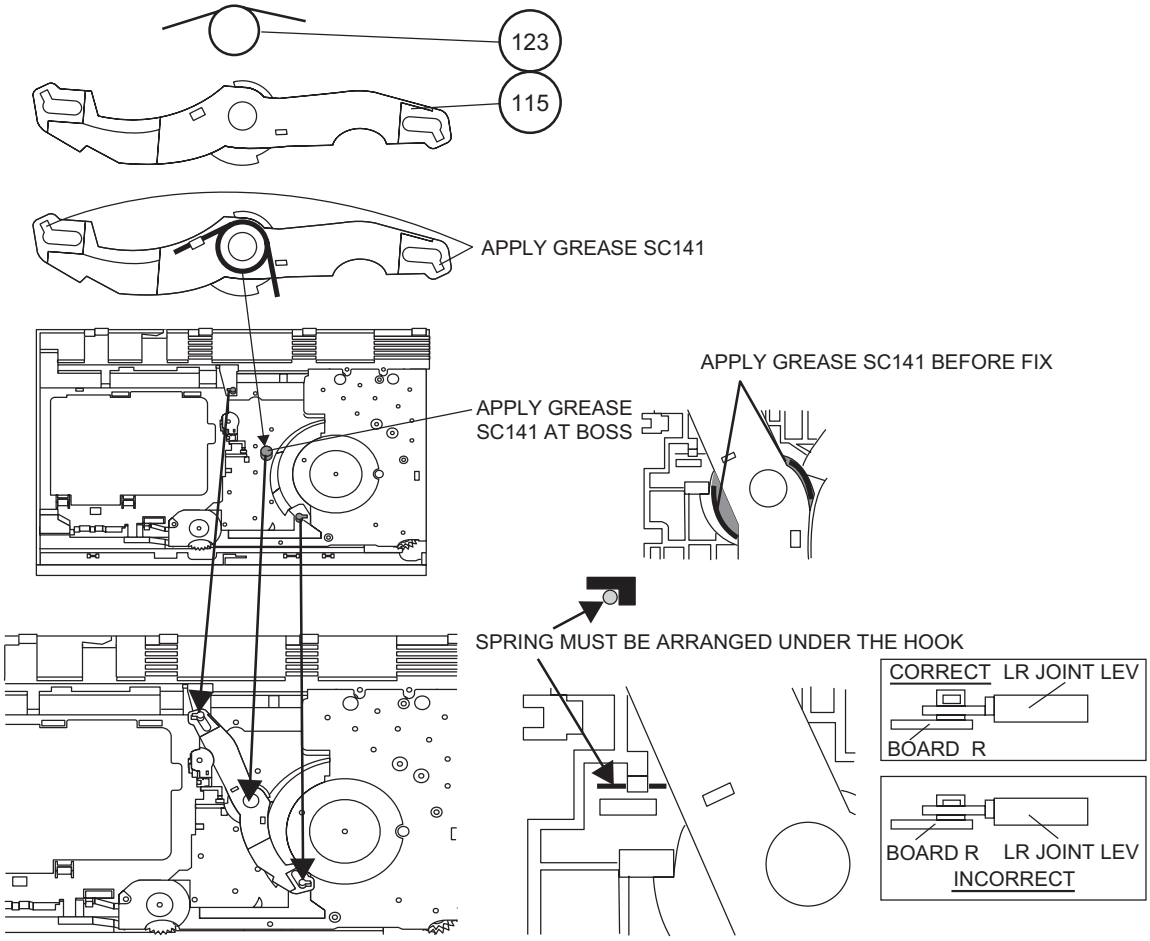
14


APPLY GREASE SC141
BEFORE FIX
MOVE 112 UNTIL TOUCH THE WALL
B
A
DURING GEAR **A** ROTATE
MUST PRESS SHOWN AREA
AND LEVER **B** WILL MOVE
ARROW DIRECTION THEN
FIX PART 108
SCREW TORQUE
2 +0.5 -0 kgf-cm
108
803 x6
APPLY GREASE SC141
CONFIRM WHETHER
FIXED
PROPELY OR NOT

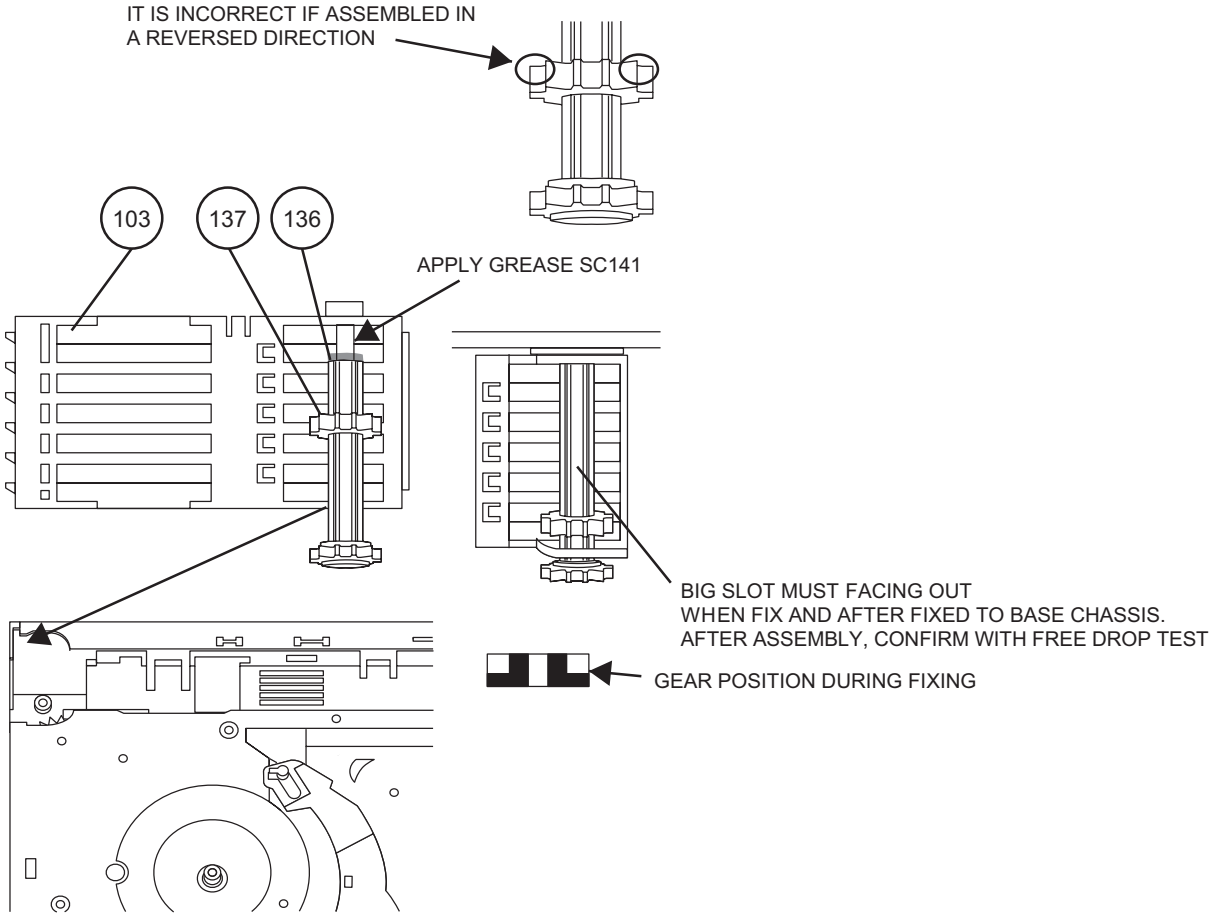
15

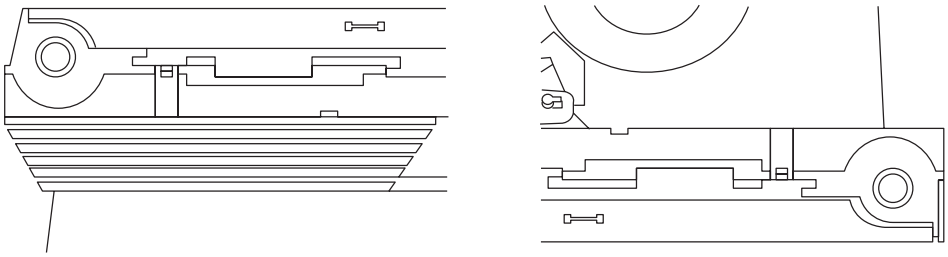

APPLY GREASE SC141
113
BEHIND THE LEVER NEED TO APPLY GREASE SC141
PULL IT THEN LEVER WILL MOVE IN

16

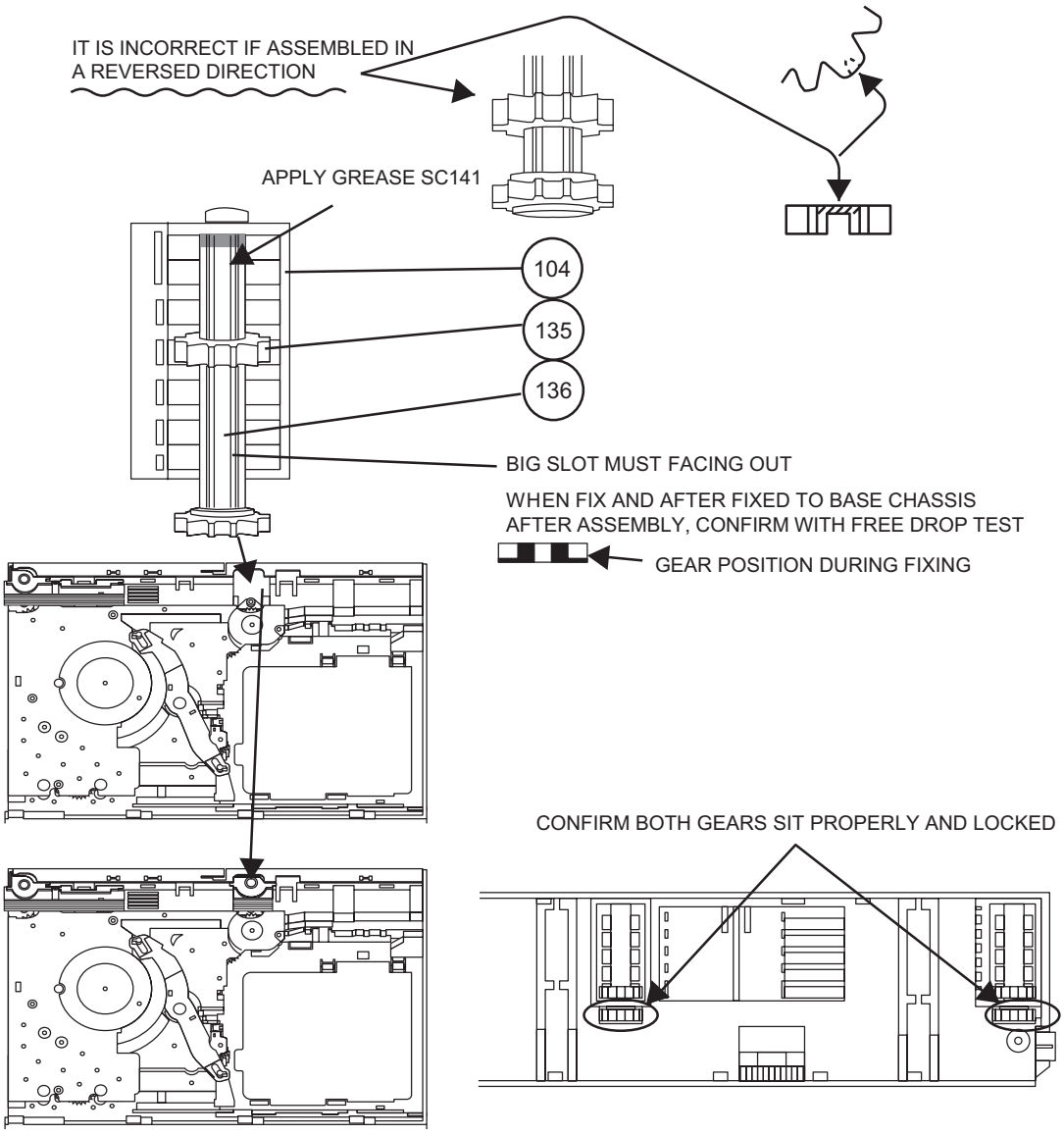

123
115
APPLY GREASE SC141
APPLY GREASE SC141 BEFORE FIX
APPLY GREASE
SC141 AT BOSS
SPRING MUST BE ARRANGED UNDER THE HOOK
CORRECT LR JOINT LEV
BOARD R
BOARD R LR JOINT LEV
INCORRECT

17

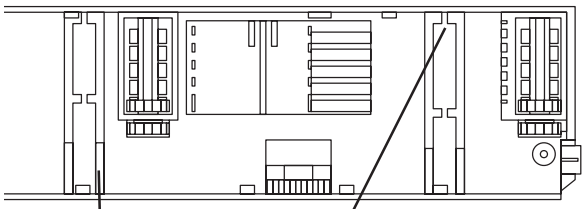

IT IS INCORRECT IF ASSEMBLED IN
A REVERSED DIRECTION
103
137
136
APPLY GREASE SC141
BIG SLOT MUST FACING OUT
WHEN FIX AND AFTER FIXED TO BASE CHASSIS.
AFTER ASSEMBLY, CONFIRM WITH FREE DROP TEST
GEAR POSITION DURING FIXING



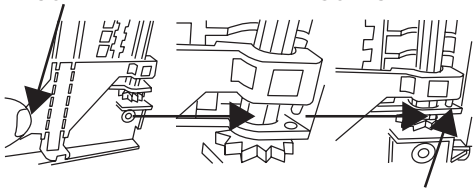
18


IT IS INCORRECT IF ASSEMBLED IN
A REVERSED DIRECTION
APPLY GREASE SC141
104
135
136
BIG SLOT MUST FACING OUT
WHEN FIX AND AFTER FIXED TO BASE CHASSIS
AFTER ASSEMBLY, CONFIRM WITH FREE DROP TEST
GEAR POSITION DURING FIXING
CONFIRM BOTH GEARS SIT PROPERLY AND LOCKED

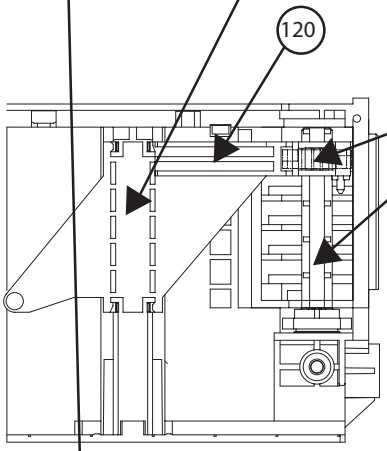
19



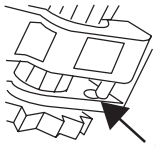
AFTER FIX OUTER UP/DOWN LEVER HOLD AS SHOWN PORTION AND
MOVE UP/DOWN THEN CONFIRM WHETHER LEVER GO INSIDE THE HOLE OR NOT



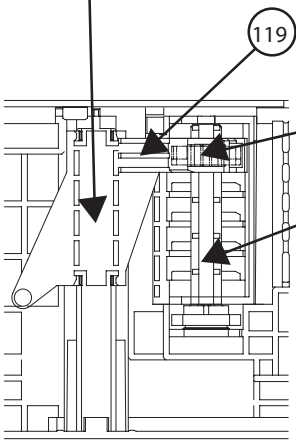
IT IS CORRECT IF THE LEVER HOLD
ENTERS THE HOLE



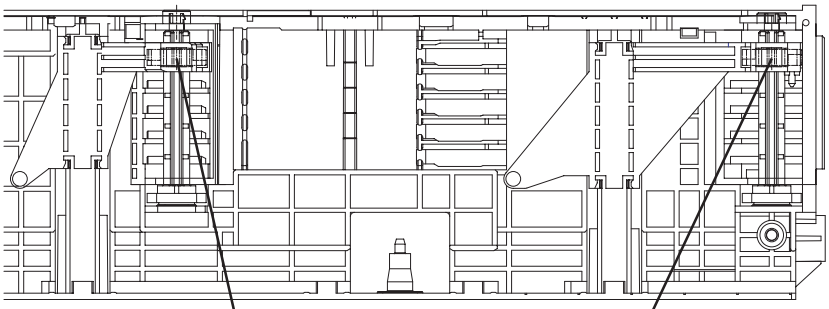
BIGGER SLOT FACING OUT



IT IS INCORRECT IF THE LEVER HOLD DOES NOT
ENTER THE HOLE

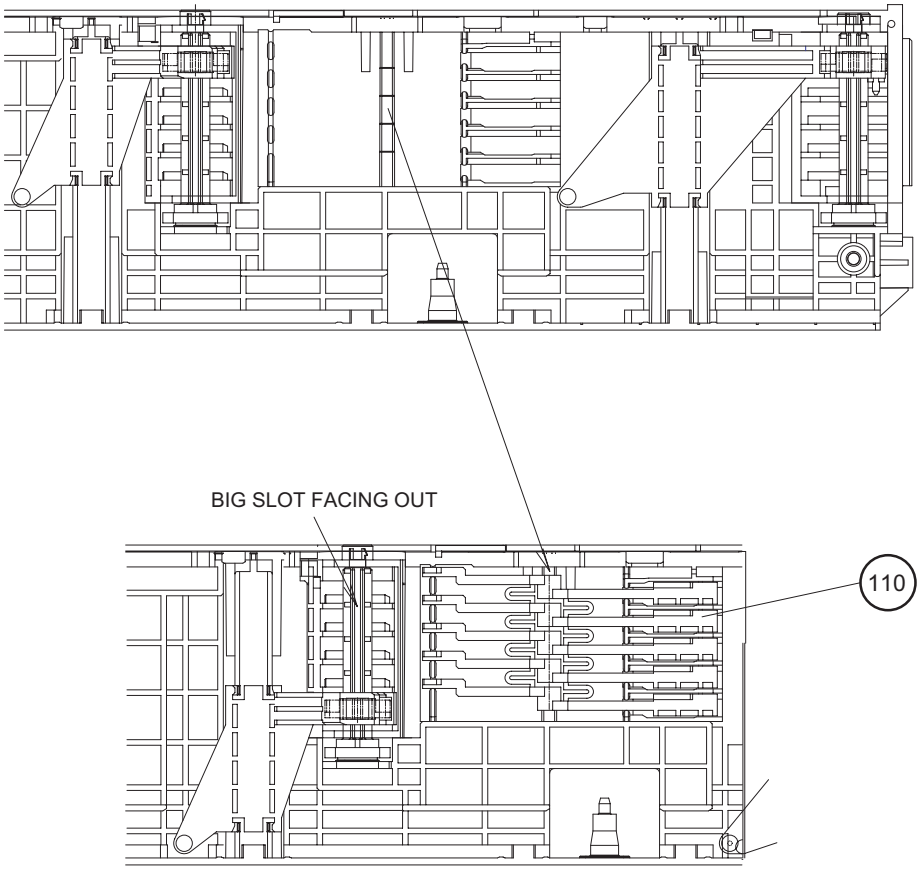


BIGGER SLOT FACING OUT

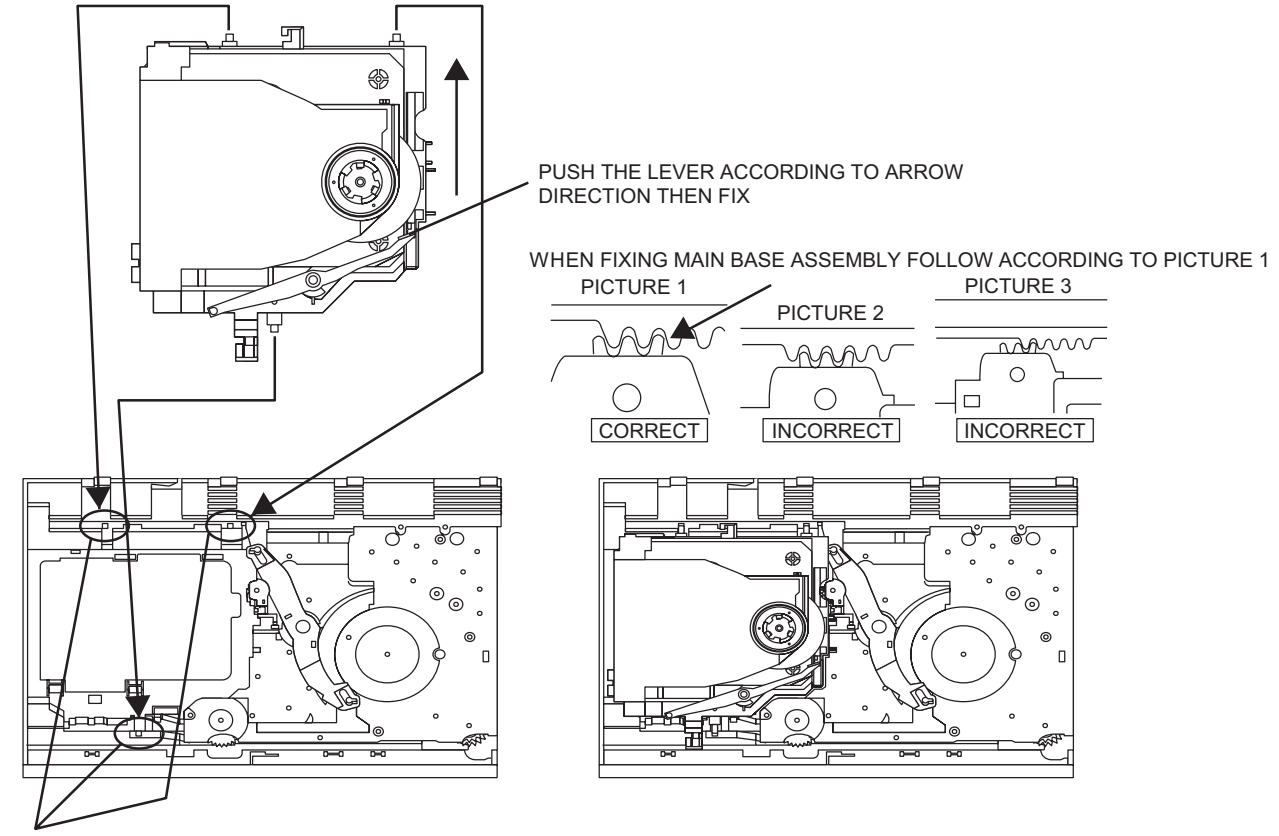


ALL OF THIS 135 AND 137 GEAR FIX TOGETHER WITH 119
AND 120 LEVER (MOVE TOGETHER)

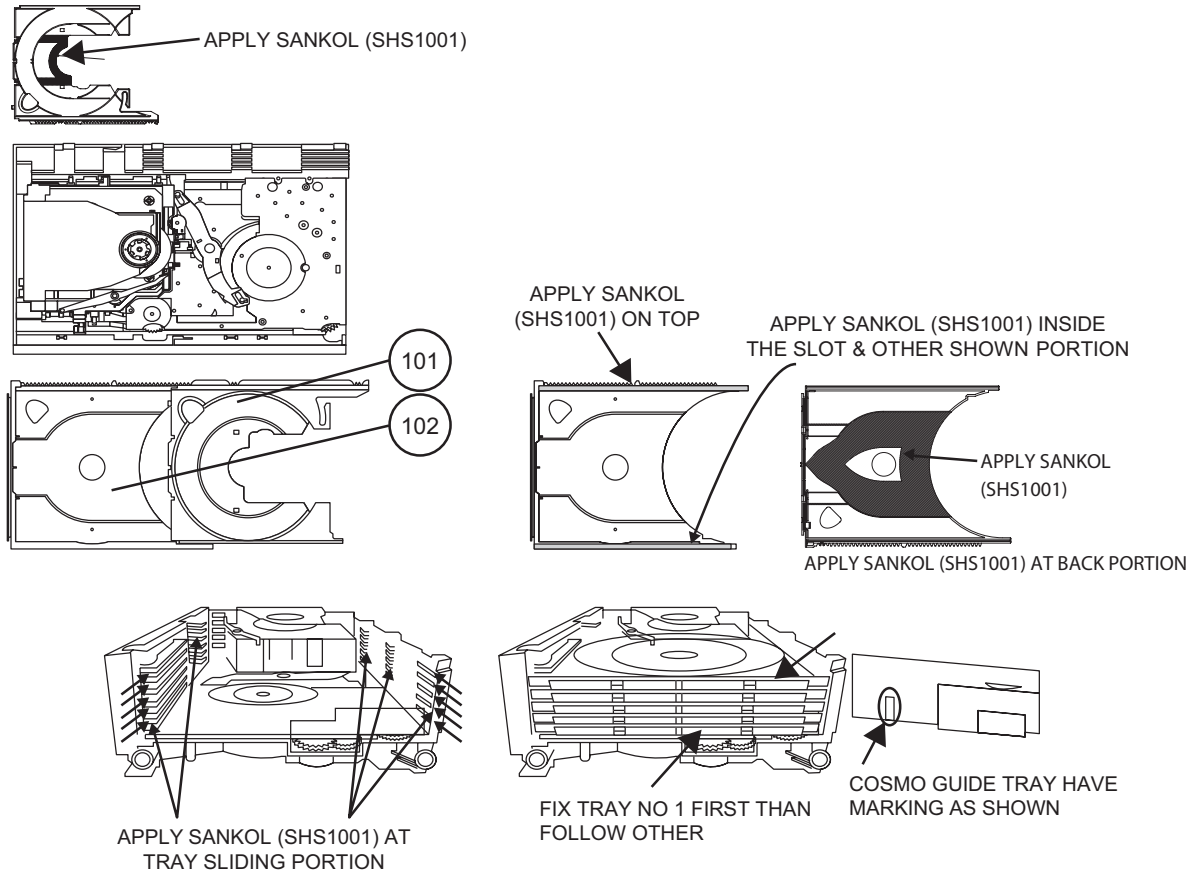
20



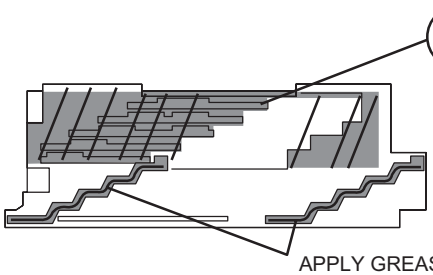
21


PUSH THE LEVER ACCORDING TO ARROW DIRECTION THEN FIX
WHEN FIXING MAIN BASE ASSEMBLY FOLLOW ACCORDING TO PICTURE 1
PICTURE 1
PICTURE 2
PICTURE 3
CORRECT
INCORRECT
INCORRECT
MAKE SURE MECHA HOLDER SHAFT FIX PROPERLY TO LEVER

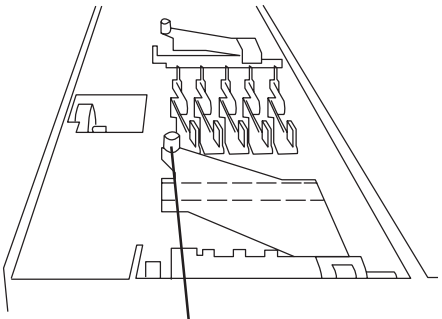
22


APPLY SANKOL (SHS1001)
101
102
APPLY SANKOL
(SHS1001) ON TOP
APPLY SANKOL (SHS1001) INSIDE
THE SLOT & OTHER SHOWN PORTION
APPLY SANKOL
(SHS1001)
APPLY SANKOL (SHS1001) AT BACK PORTION
APPLY SANKOL (SHS1001) AT
TRAY SLIDING PORTION
FIX TRAY NO 1 FIRST THAN
FOLLOW OTHER
COSMO GUIDE TRAY HAVE
MARKING AS SHOWN

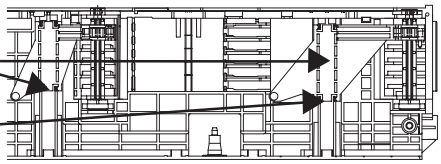
23

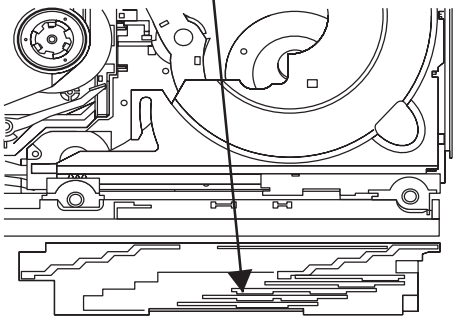


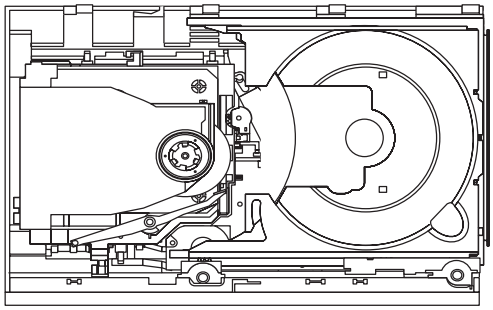
APPLY GREASE SC141 AT INNER & OUTER GEAR SLIDING PORTION



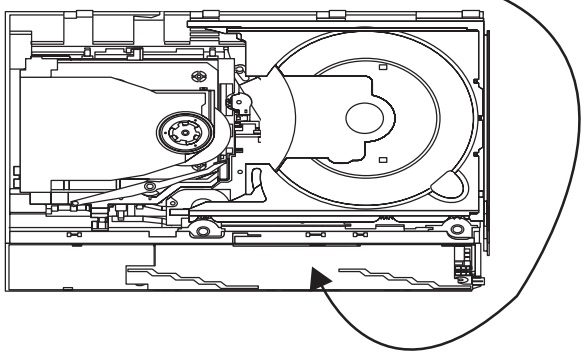
WHEN FIX GEAR UP/ DOWN BOARD THE TWO LEVER MUST AT PARALLEL LINE AND POSITIONED AT TOP MAX SIDE



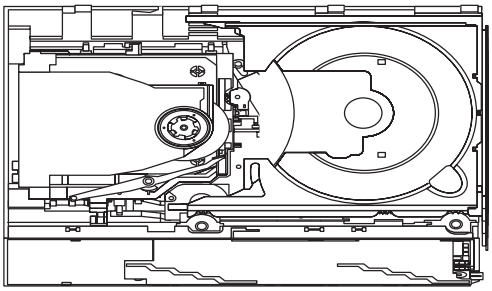




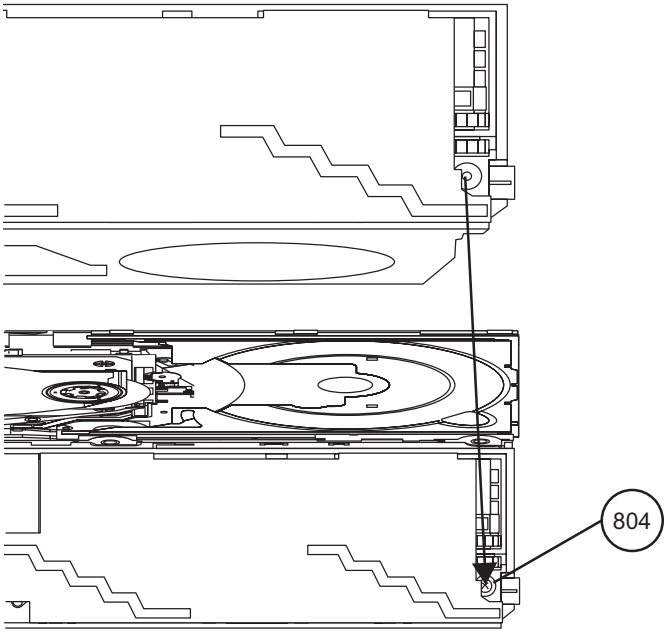
AFTER ASSEMBLY GEAR UP/DOWN BOARD

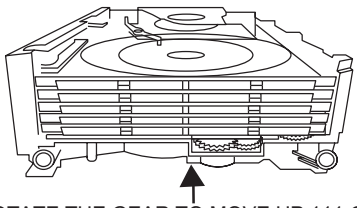


24



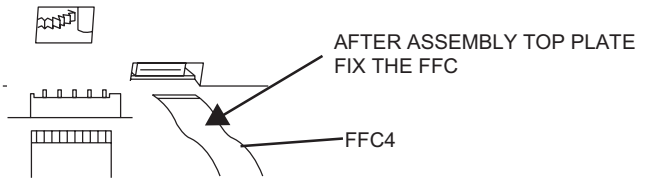
SCREW TORQUE
3 $^{+0.5}_{-0}$ kgf-cm

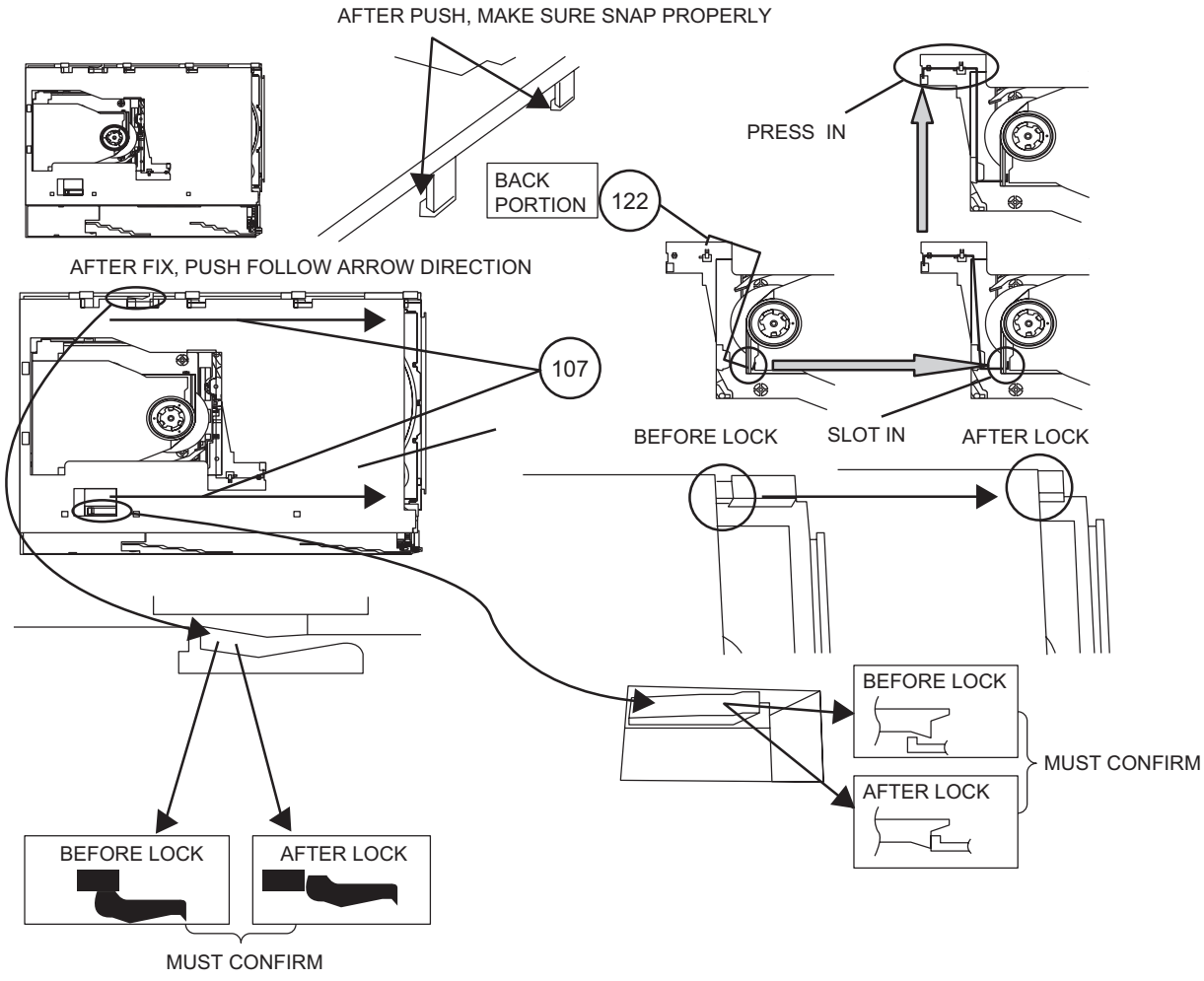




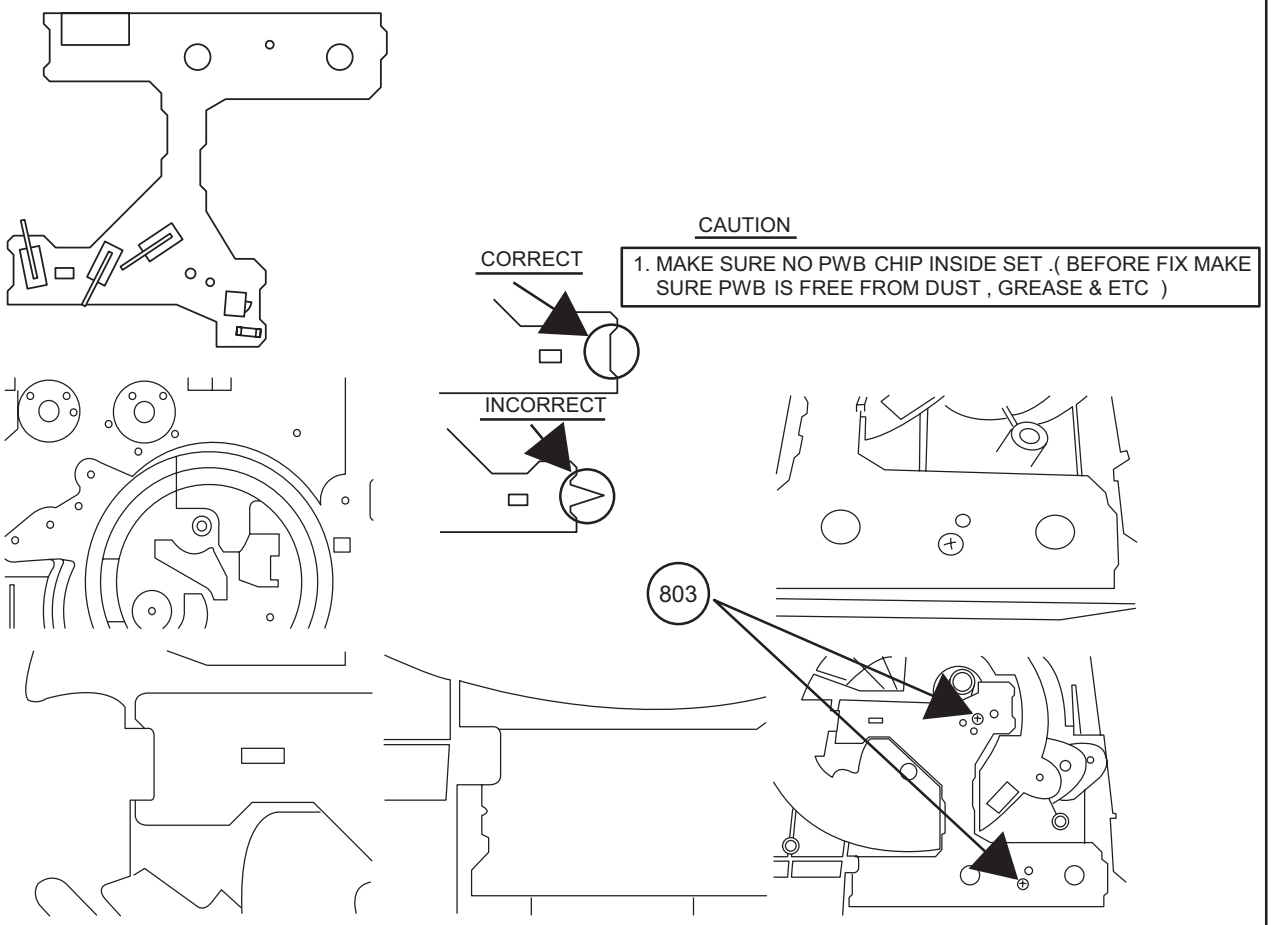
ROTATE THE GEAR TO MOVE UP 111 GEAR
UP AND DOWN BOARD BEFORE SCREW

25

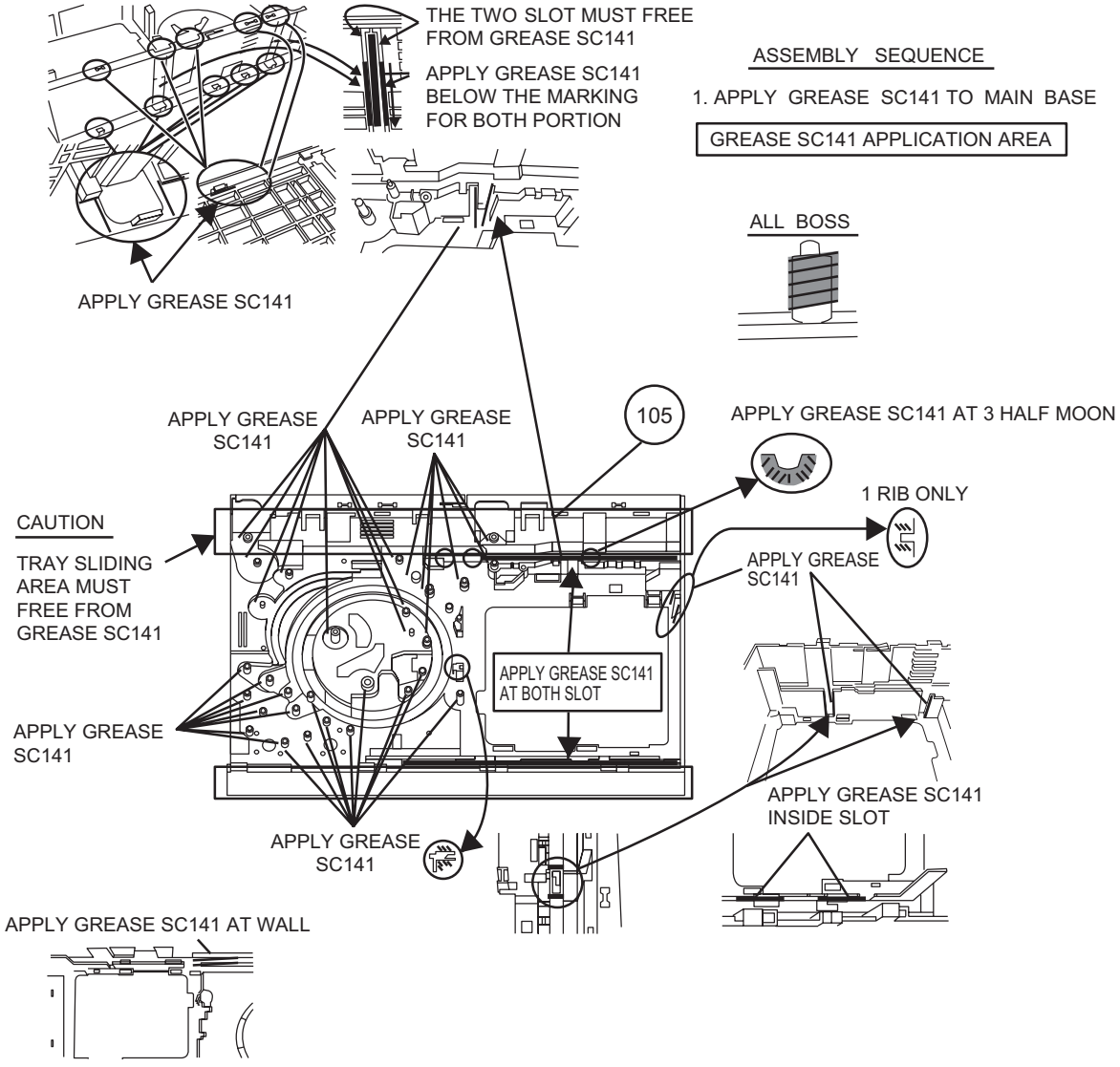

AFTER ASSEMBLY TOP PLATE
FIX THE FFC
FFC4


AFTER PUSH, MAKE SURE SNAP PROPERLY
PRESS IN
BACK
PORTION
122
AFTER FIX, PUSH FOLLOW ARROW DIRECTION
107
BEFORE LOCK
SLOT IN
AFTER LOCK
BEFORE LOCK
AFTER LOCK
MUST CONFIRM
BEFORE LOCK
AFTER LOCK
MUST CONFIRM

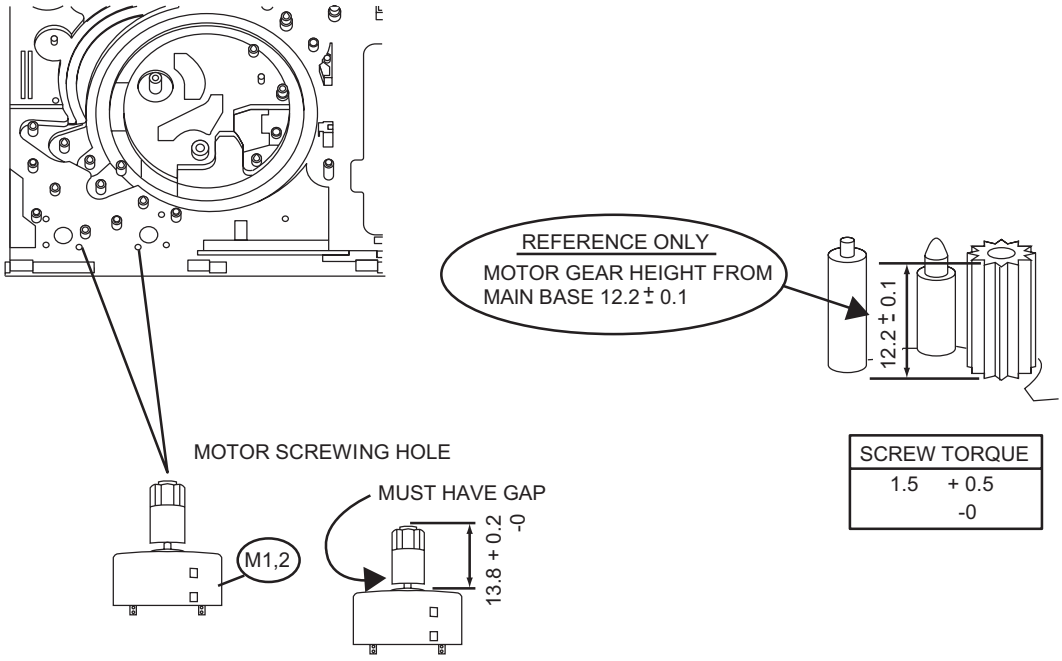
26

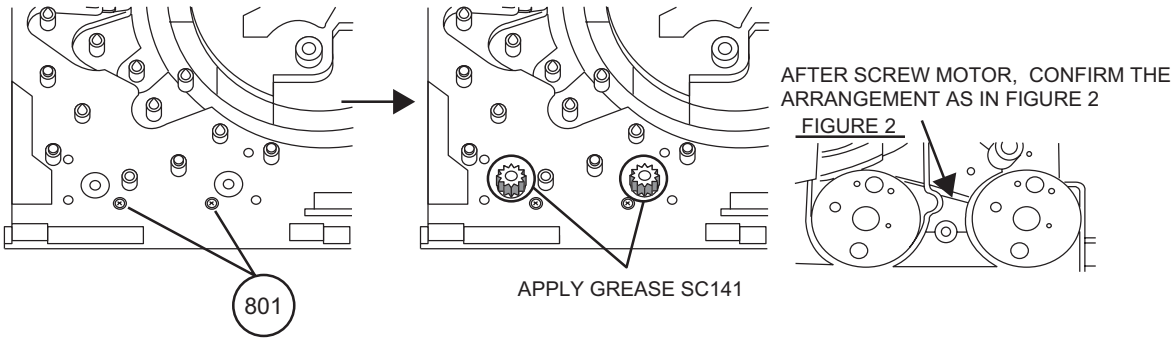

CAUTION
1. MAKE SURE NO PWB CHIP INSIDE SET .(BEFORE FIX MAKE SURE PWB IS FREE FROM DUST , GREASE & ETC)
CORRECT
INCORRECT
803

27

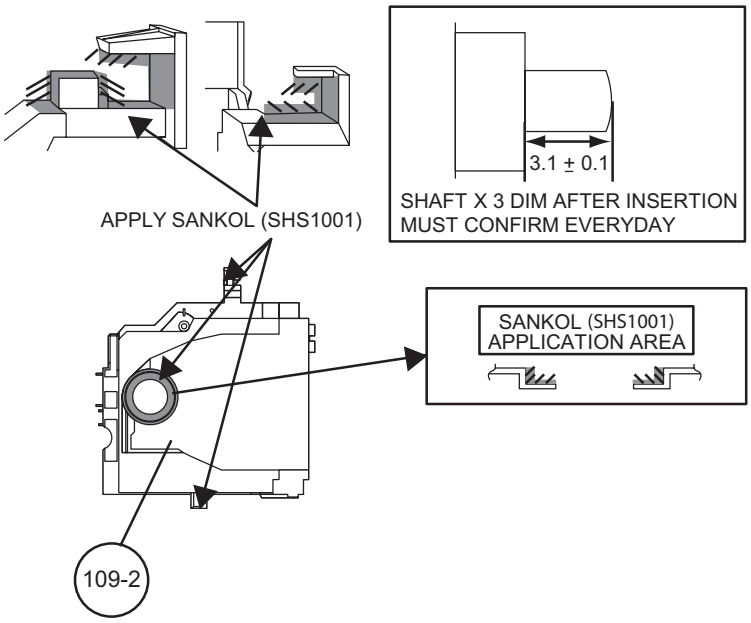

THE TWO SLOT MUST FREE FROM GREASE SC141
APPLY GREASE SC141 BELOW THE MARKING FOR BOTH PORTION
ASSEMBLY SEQUENCE
1. APPLY GREASE SC141 TO MAIN BASE
GREASE SC141 APPLICATION AREA
ALL BOSS
APPLY GREASE SC141
APPLY GREASE SC141
APPLY GREASE SC141
105
APPLY GREASE SC141 AT 3 HALF MOON
1 RIB ONLY
CAUTION
TRAY SLIDING AREA MUST FREE FROM GREASE SC141
APPLY GREASE SC141
APPLY GREASE SC141 AT BOTH SLOT
APPLY GREASE SC141
APPLY GREASE SC141
APPLY GREASE SC141 INSIDE SLOT
APPLY GREASE SC141 AT WALL

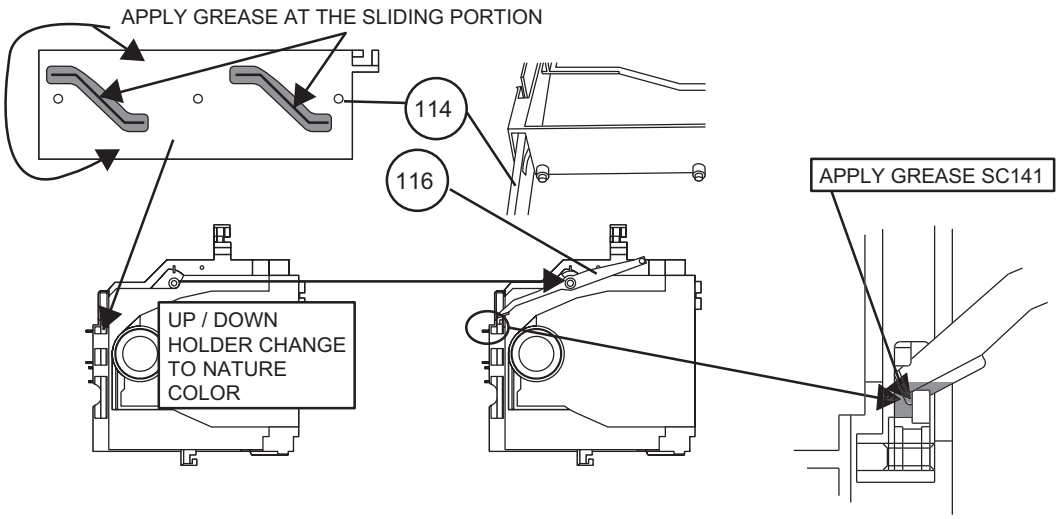
28


REFERENCE ONLY
MOTOR GEAR HEIGHT FROM
MAIN BASE 12.2 ± 0.1
12.2 ± 0.1
MOTOR SCREWING HOLE
M1,2
MUST HAVE GAP
13.8 + 0.2 -0
SCREW TORQUE
1.5 + 0.5 -0

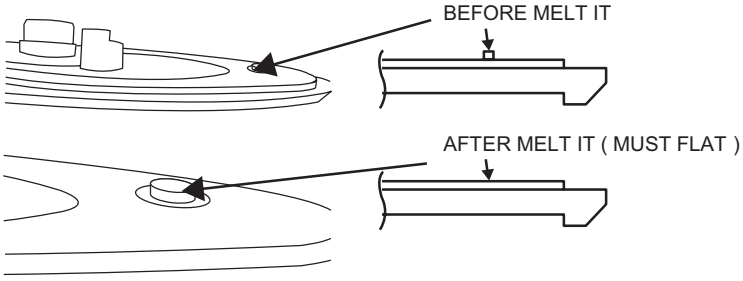

801
APPLY GREASE SC141
AFTER SCREW MOTOR, CONFIRM THE ARRANGEMENT AS IN FIGURE 2
FIGURE 2

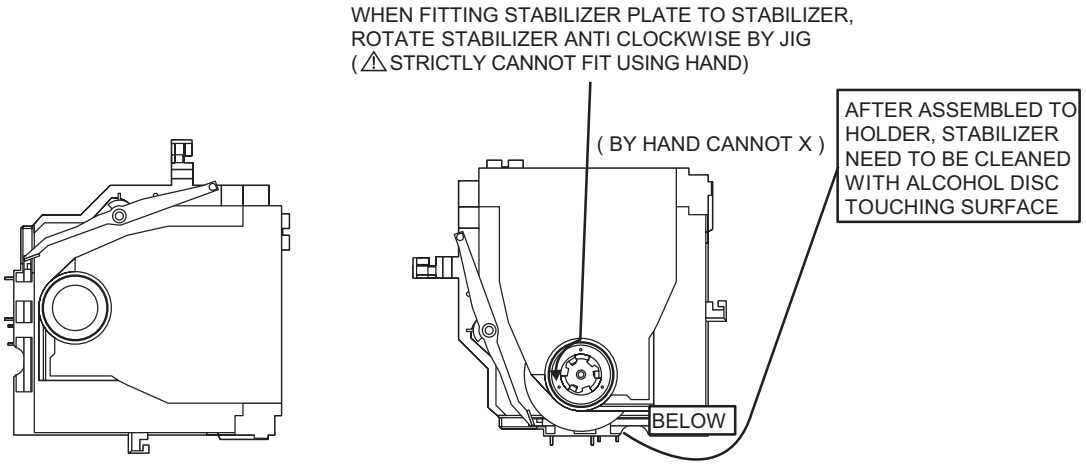
29


3.1 ± 0.1
SHAFT X 3 DIM AFTER INSERTION
MUST CONFIRM EVERYDAY
APPLY SANKOL (SHS1001)
SANKOL (SHS1001)
APPLICATION AREA
109-2

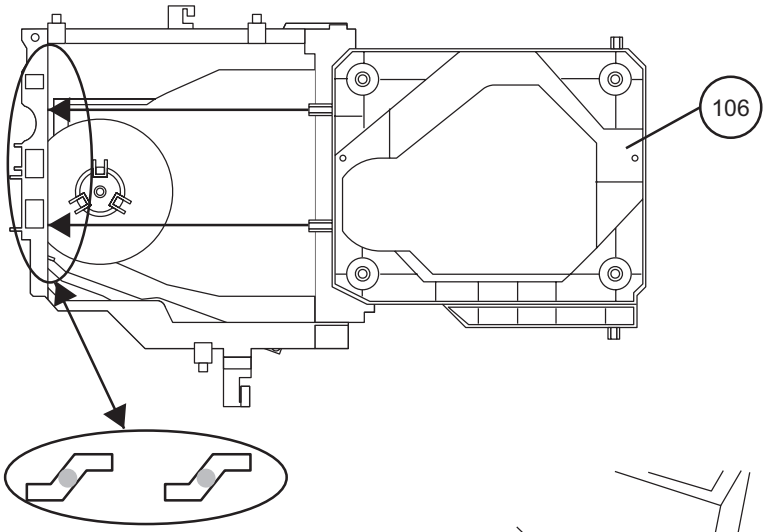

APPLY GREASE AT THE SLIDING PORTION
114
116
APPLY GREASE SC141
UP / DOWN
HOLDER CHANGE
TO NATURE
COLOR

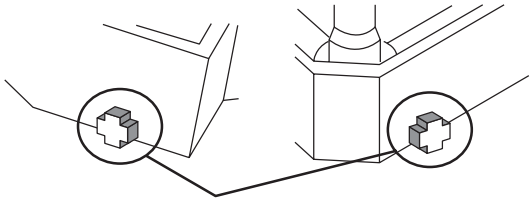
30

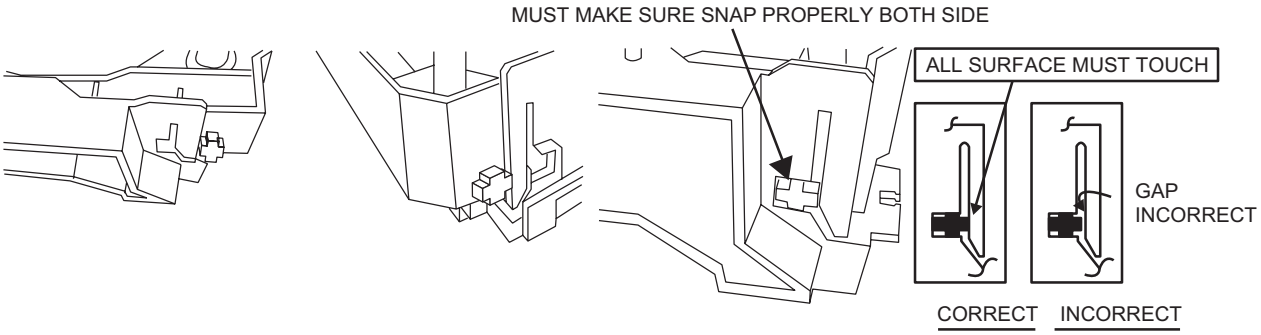

BEFORE MELT IT
AFTER MELT IT (MUST FLAT)


WHEN FITTING STABILIZER PLATE TO STABILIZER,
ROTATE STABILIZER ANTI CLOCKWISE BY JIG
(⚠STRICTLY CANNOT FIT USING HAND)
(BY HAND CANNOT X)
AFTER ASSEMBLED TO HOLDER, STABILIZER NEED TO BE CLEANED WITH ALCOHOL DISC TOUCHING SURFACE
BELOW

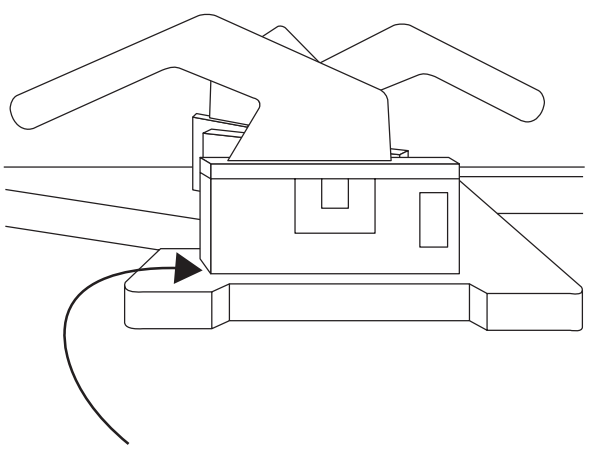
31


106


APPLY GREASE SC141

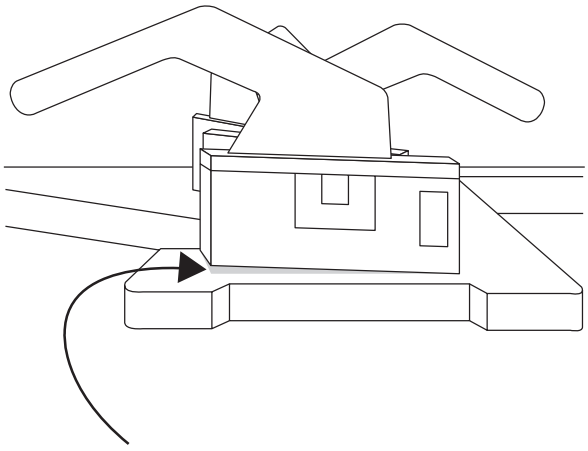

MUST MAKE SURE SNAP PROPERLY BOTH SIDE
ALL SURFACE MUST TOUCH
GAP
INCORRECT
CORRECT
INCORRECT

32



NO GAP

CORRECT



HAVE GAP

INCORRECT

CHAPTER 3. MECHANISM BLOCKS

[1] Caution on disassembly

Caution on Disassembly

Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep it safe and ensure excellent performance:

1. Take cassette tape and compact disc out of the unit.
2. Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need to be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.

STEP	REMOVAL	PROCEDURE	FIGURE
1	Top Cabinet	1. Screw.....(A1) x5	1
2	Side Panel (Left/ Right)	2. Screw.....(B1) x8	1
3	CD Changer unit	1. Hook.....(C1) x2 2. Socket.....(C2) x1 3. Flat Cable.....(C3) x1	2
4	Rear Panel with Fan motor	1. Screw.....(D1) x9	2
5	Front Panel	1. Screw.....(E1) x3 2. Flat Cable.....(E2) x1 3. Socket.....(E3) x1 4. Hook.....(E4) x2	2,3 2 2 3
6	Main PWB	1. Screw.....(F1) x3 2. Socket.....(F2) x4	2,3 3
7	Power PWB	1. Screw.....(G1) x4	3
8	Tape Mechanism	1. Screw.....(H1) x6 2. Flat Cable.....(H2) x1	4
9	Game Input PWB	1. Screw.....(J1) x2	5
10	Display PWB	1. Knob.....(K1) x1 2. Nut.....(K2) x1 3. Washer.....(K3) x1 4. Screw.....(K4) x6	5
11	CD Servo PWB	1. Screw.....(L1) x3 2. Flat Cable.....(L2) x2 2. Socket.....(L3) x1	6
12	Changer Mechanism Unit	1. Screw.....(M1) x4 2. Changer Chassis...(M2) x1	7
15	CD Mechanism	1. Screw.....(N1) x4	8

Note:

After removing the connector for the optical pickup from the connector, wrap the conductive aluminium foil around the front end of the connector so as to protect the optical pickup from electro-static damage.

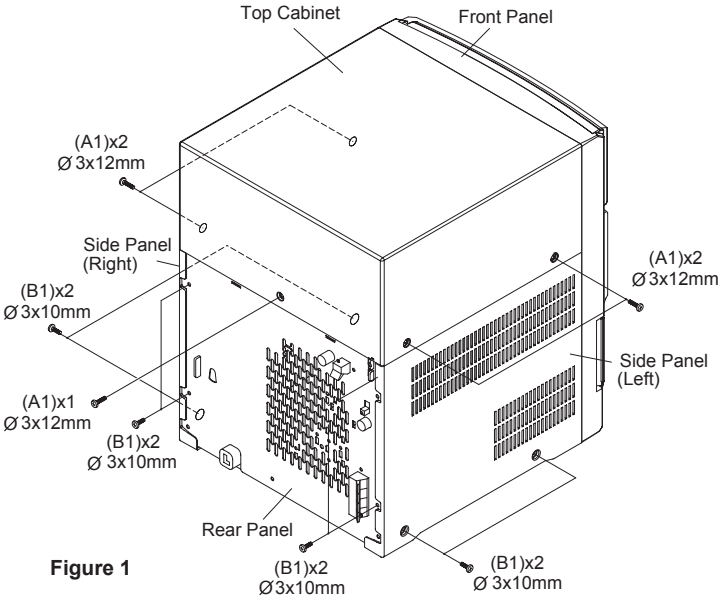


Figure 1

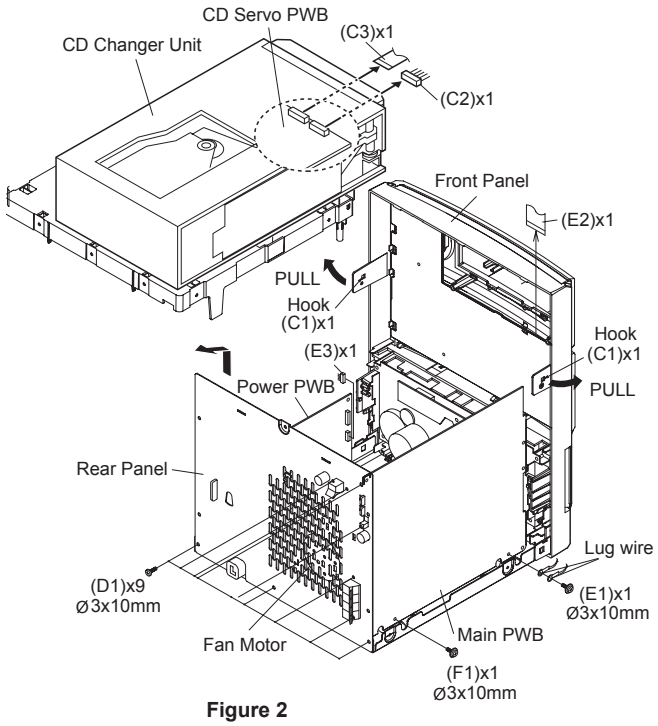


Figure 2

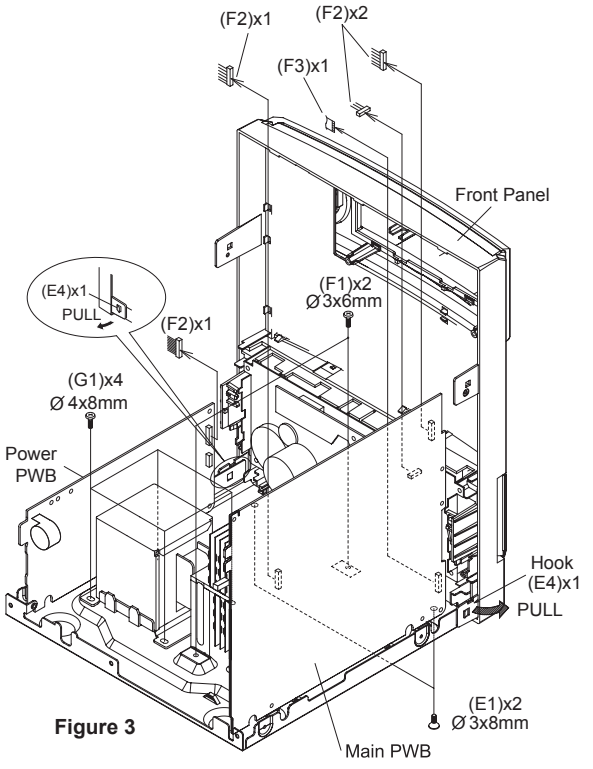


Figure 3

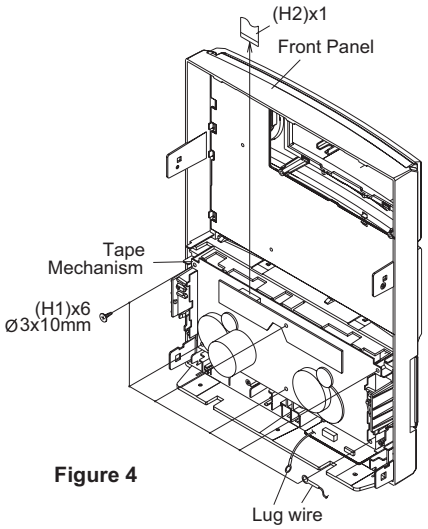


Figure 4

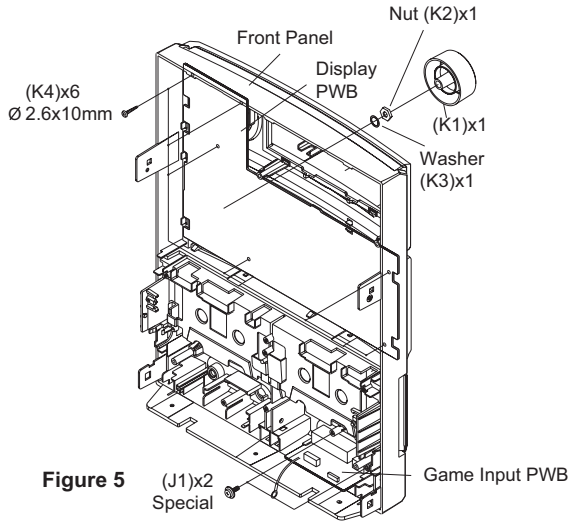


Figure 5

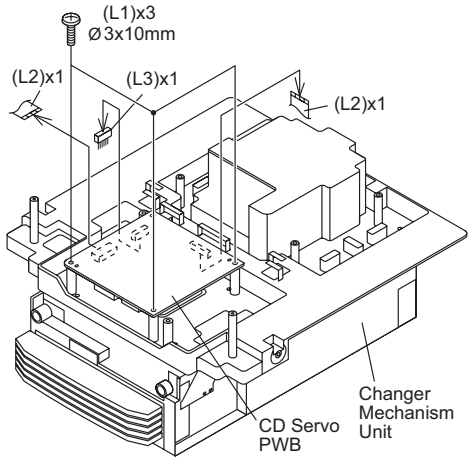


Figure 6

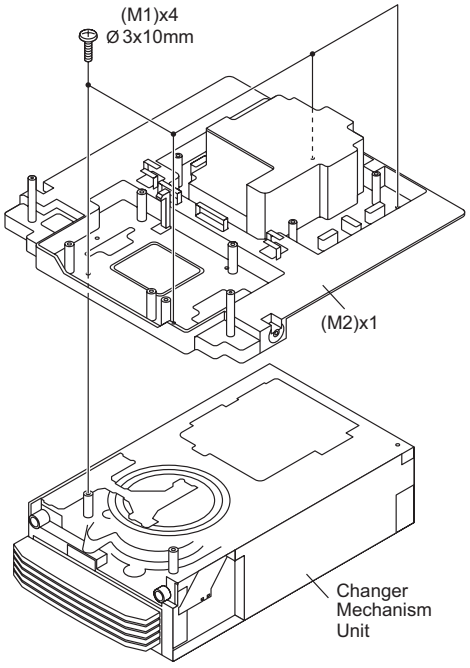


Figure 7

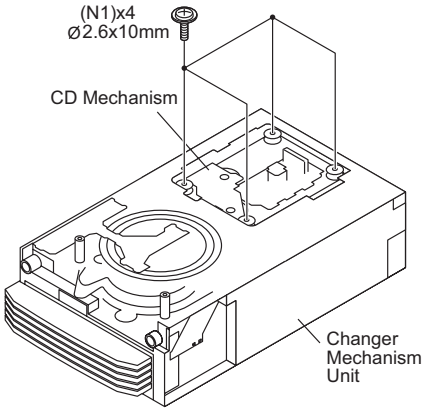


Figure 8

STEP	REMOVAL	PROCEDURE	FIGURE
1	Woofer	1. Front Panel.....(A1) x1 2. Socket.....(A2) x1 3. Screw.....(A3) x2 4. Screw.....(A4) x4	9
2	Tweeter	1. Screw.....(B1) x2	
3	Super tweeter	1. Screw.....(C1) x2	

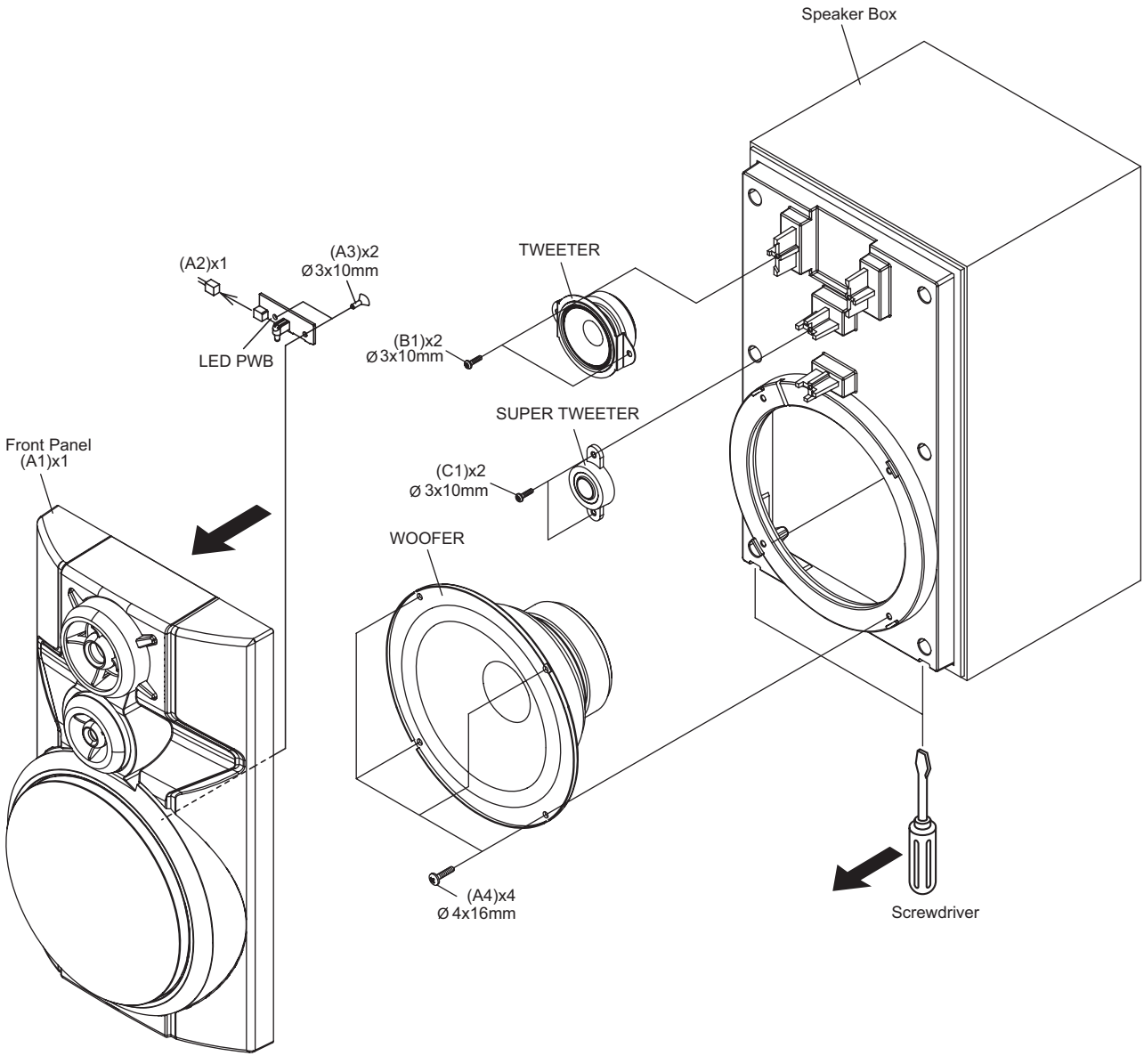


Figure 9

[2] Removing and reinstalling the main parts

1. TAPE MECHANISM SECTION

Perform steps 1 to 5 and 6 of the disassembly method to remove the tape mechanism.

1.1. How to remove the record/playback and erase heads (TAPE 2) (See Fig. 1)

1. When you remove the screws (A1) x 2 pcs., the recording/playback head and three-dimensional head of the erasing head can be removed.

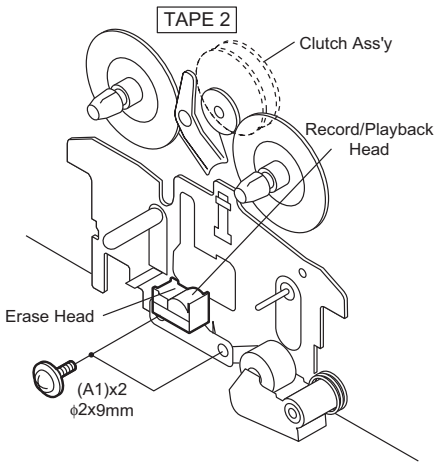


Figure 1

1.2. How to remove the playback head (TAPE 1)(See Fig. 2)

1. When you remove the screws (B1) x 2 pcs., the playback head can be removed.

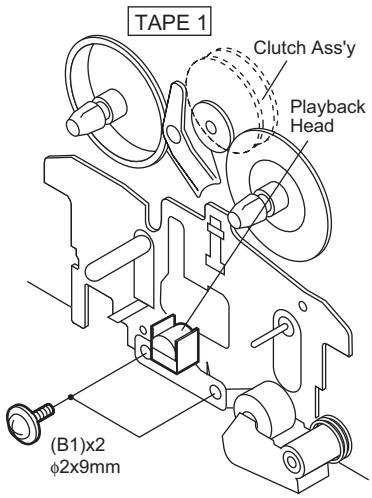


Figure 2

1.3. How to remove the pinch roller (TAPE 1/2) (See Fig. 3)

1. Carefully bend the pinch roller pawl in the direction of the arrow <A>, and remove the pinch roller (C1) x 1 pc., in the direction of the arrow <B>.

Note:
When installing the pinch roller, pay attention to the spring mounting position.

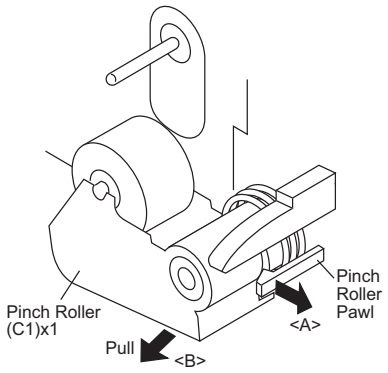


Figure 3

1.4. How to remove the belt (TAPE 2) (See Fig. 4)

1. Remove the main belt (D1) x 1 pc., from the motor side.
2. Remove the FF/REW belt (D2) x 1 pc.

1.5. How to remove the belt (TAPE 1) (See Fig. 4)

1. Remove the main belt (E1) x 1 pc., from the motor side.
2. Remove the FF/REW belt (E2) x 1 pc.

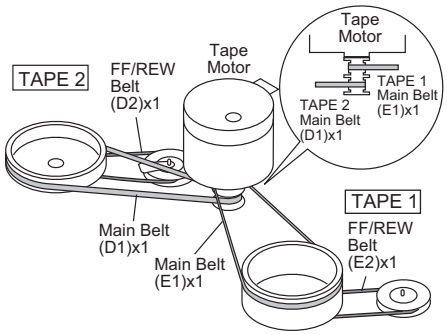


Figure 4

1.6. How to remove the motor (See Fig. 5)

1. Remove the screws (F1) x 2 pcs., to remove the motor.

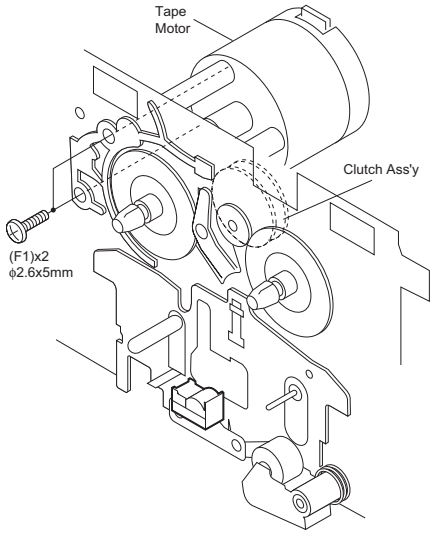


Figure 5

2. CD MECHANISM SECTION

Perform steps 1, 2, 9, 10, 11 and 12 of the disassembly method to remove the CD mechanism.

2.1. Remove the pickup. (See Fig. 1)

1. Remove the stop washer (A1) x 1 pc., to remove the gear (A2) x 1 pc.
2. Remove the screws (A3) x 2 pcs., to remove the shaft (A4) x 1 pc.
3. Remove the pickup.

Note:

After removing the connector for the optical pickup from the connector wrap the conductive aluminium foil around the front end of connector so as to protect the optical pickup from electrostatic damage.

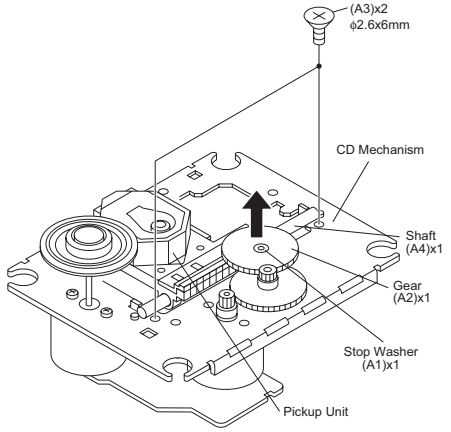


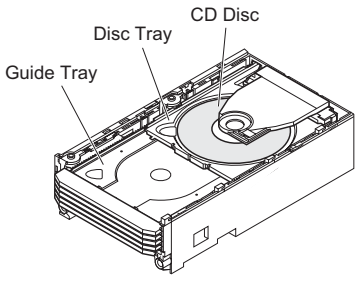
Figure 1

3. CHANGER MECHANISM SECTION

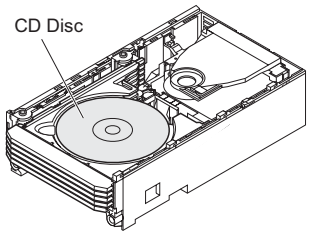
Perform steps 1, 2, 9 and 10 of the disassembly method to remove the CD changer mechanism.

3.1. How to remove CD Disc (See Fig. 2~5)

1. When CD is at play position (Figure 2), rotate reduction gear C clock-wise as shown in Figure 3 Until disc tray is at stock position, then rotate further to eject the disc tray so that CD can be removed from the tray.



CD at play position.



CD at stalk position.

Figure 2

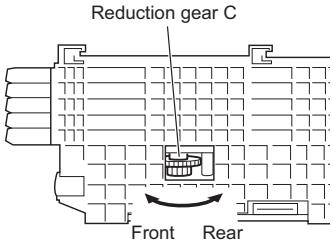


Figure 3

2. In another case, if CD mechanism is at tray No.1 play position and to remove CD located in tray No.3, the procedure is as follows:

   If the gear up down board is located at tray No.1 position, then rotate gear clock-wise until it at stock position. Rotate reduction gear D clockwise (Figure 4) to move the CD mechanism to tray No.3 position.This is confirmed by checking the gear up down board position by the marking as indicated on the main chassis as shown in Figure 5.

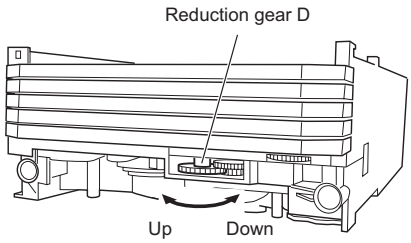


Figure 4

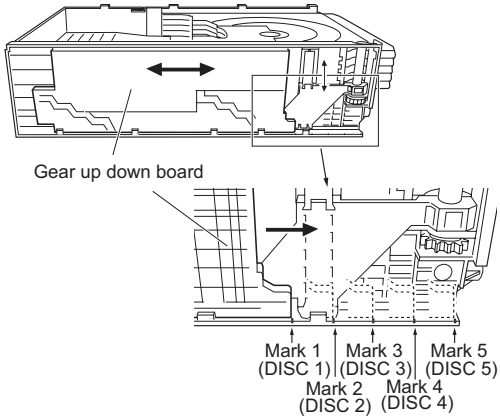


Figure 5

3.2. How to Remove the tray motor/main cam motor/5-Changer Motor PWB (See Fig. 1)

1. Remove the screws (A1) x 2 pcs., to remove tray motor/main cam motor/5-Changer Motor PWB.

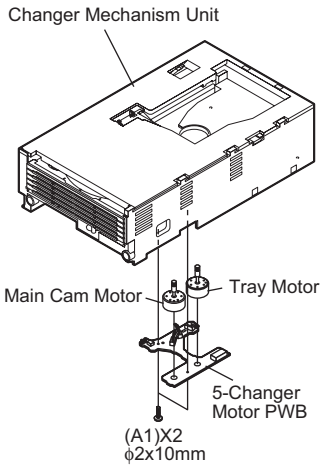


Figure 1

NOTE:There are 2 more screws tighten the motors at the bottom of main chassis. Before performing procedure 1 above, disc stop spring, top plate sear up down board and trays must be removed, then only the 2 screws can be untighten.

CHAPTER 4. DIAGRAMS

[1] CD Block diagram

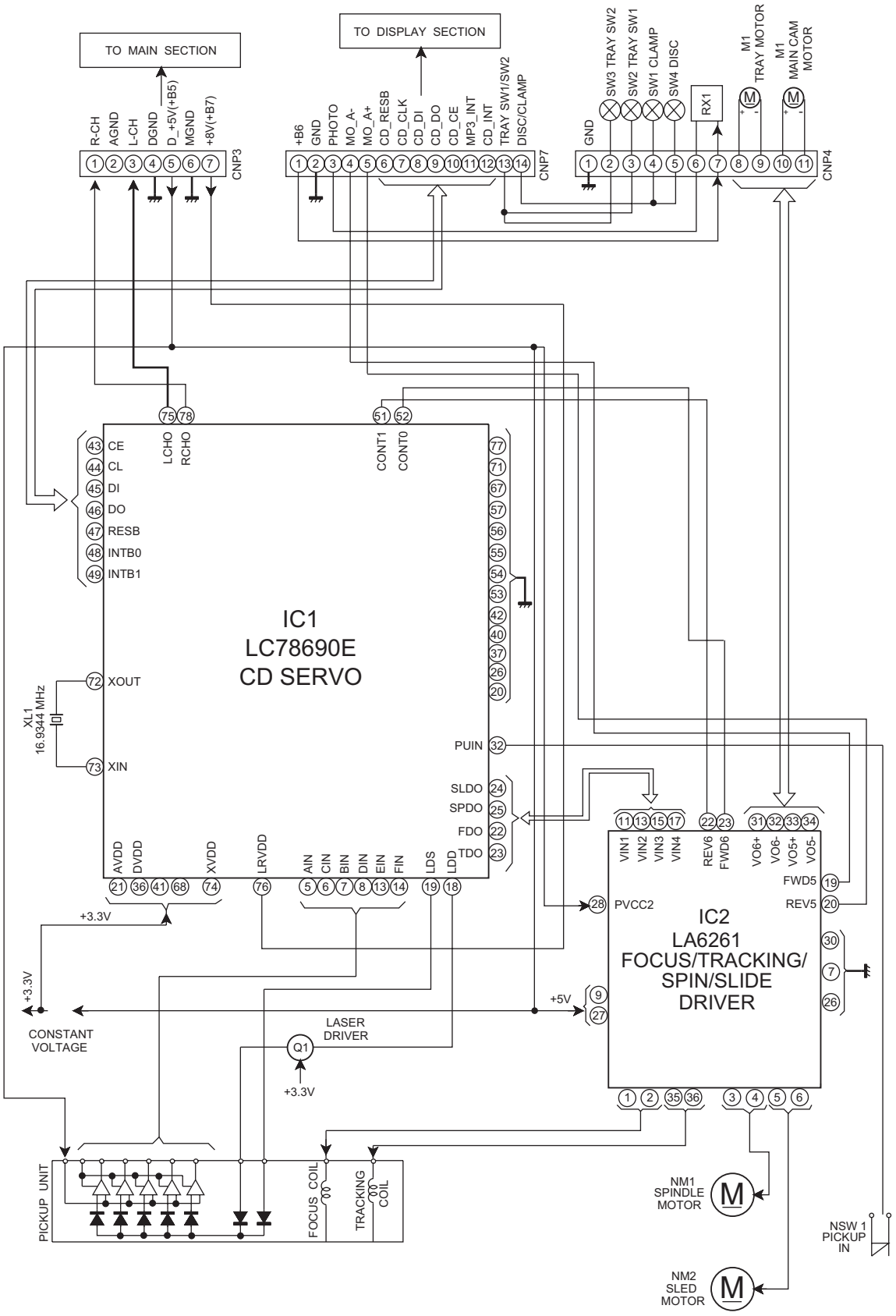


Figure 4-1: CD BLOCK DIAGRAM

[2] Main Block diagrams

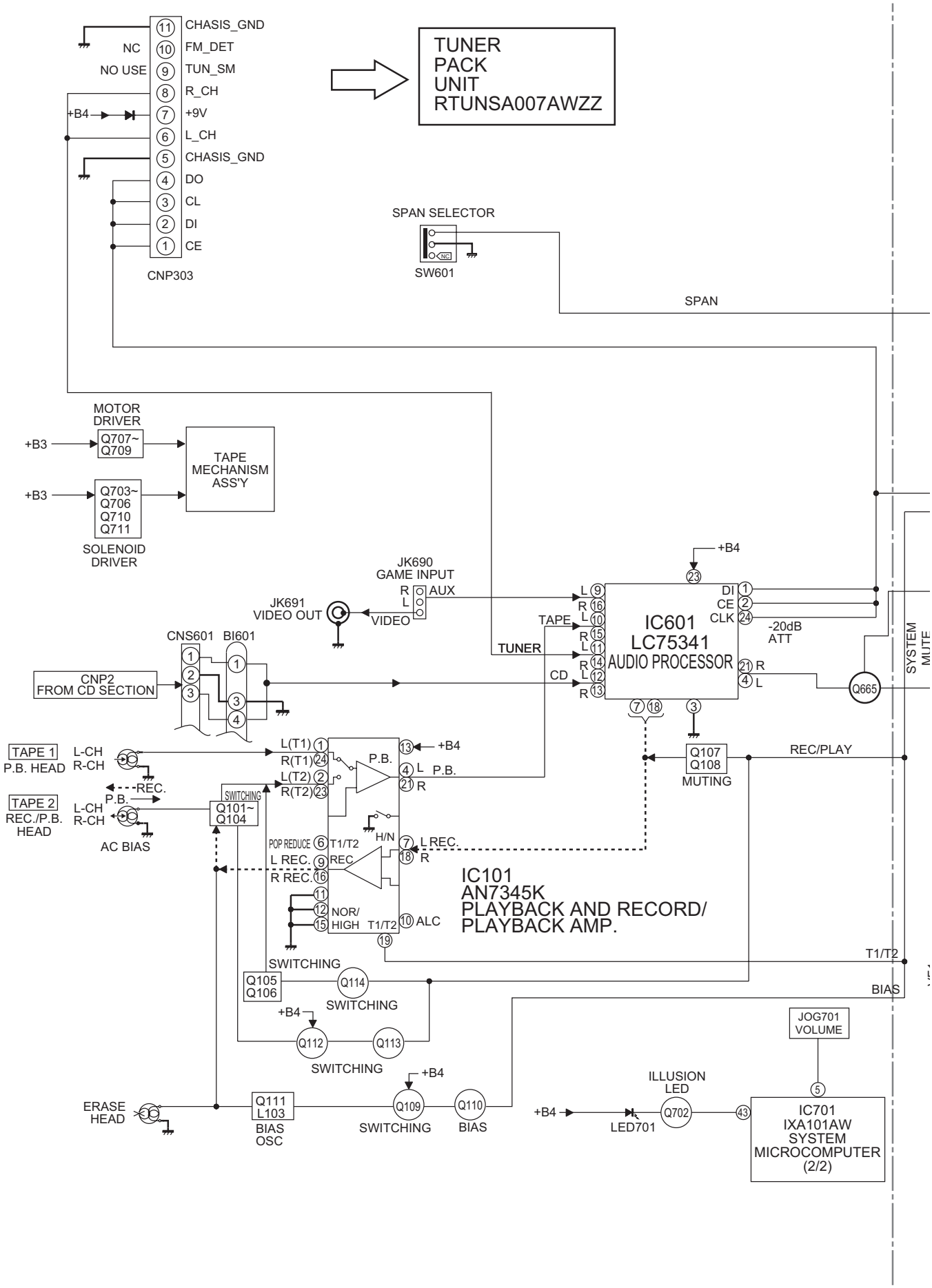


Figure 4-2: MAIN BLOCK DIAGRAM (1/2)

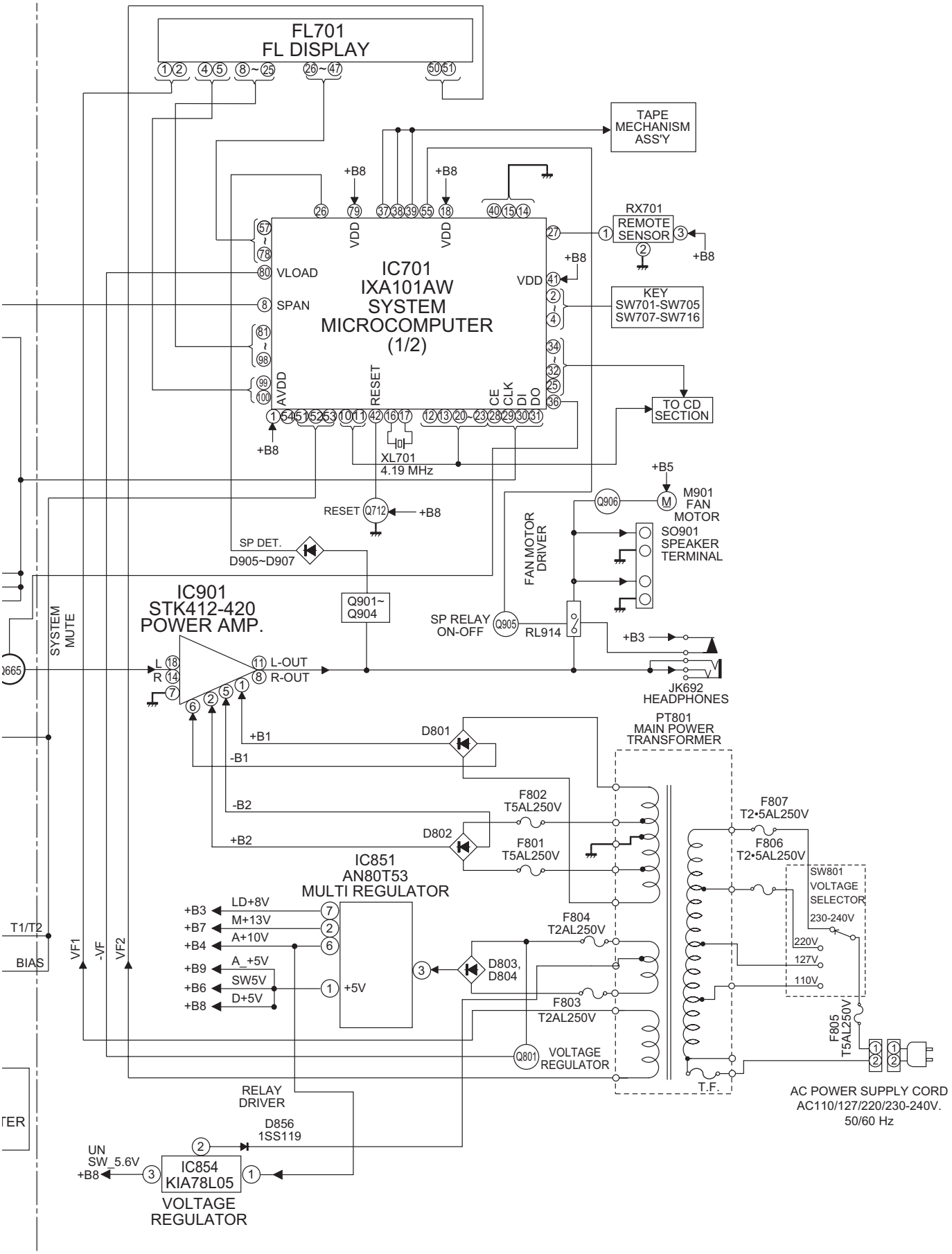


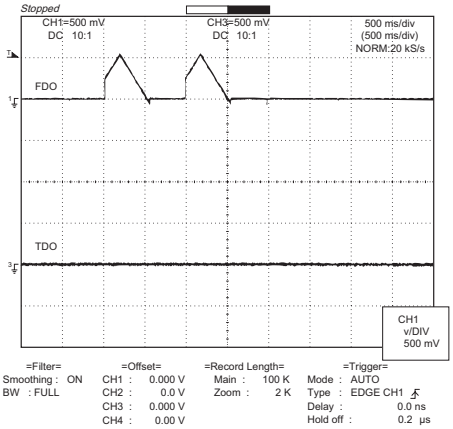
Figure 4-3: MAIN BLOCK DIAGRAM (2/2)

CHAPTER 5. CIRCUIT DESCRIPTION

[1] Waveforms of CD Circuit

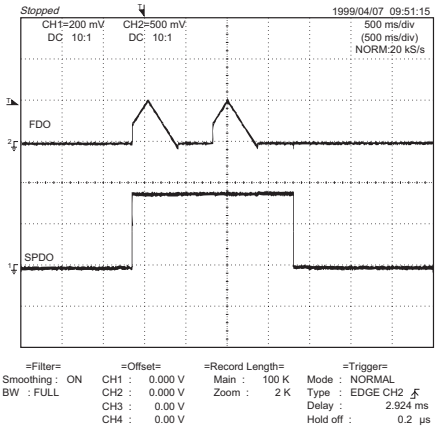
1 IC1 (22)

2 IC1 (23)



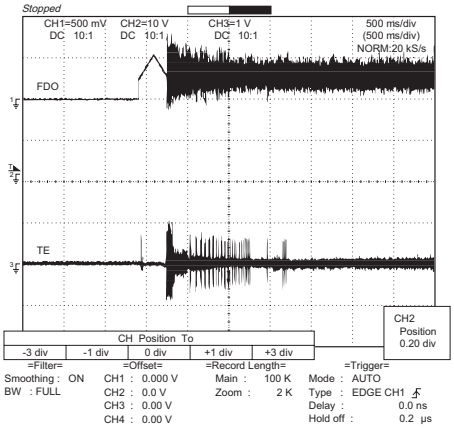
1 IC1 (22)

5 IC1 (25)



1 IC1 (22)

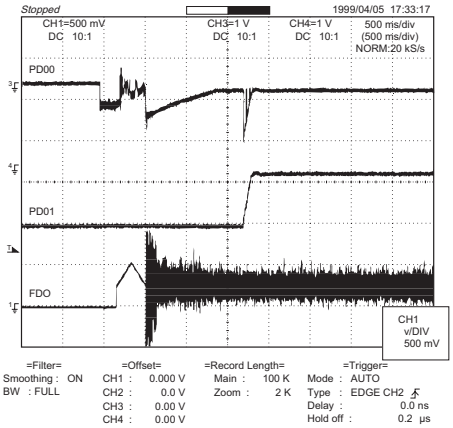
3 IC1 (16)



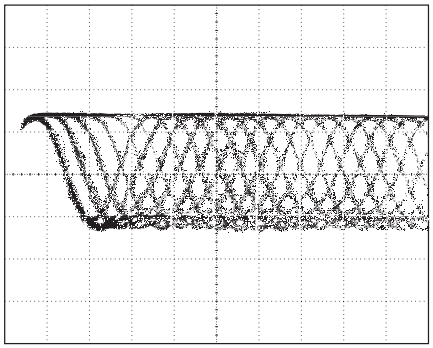
6 IC1 (28)

7 IC1 (27)

1 IC1 (22)



4 IC1 (2)



[2] Voltage

IC701			
PIN NO	VOLTAGE	PIN NO	VOLTAGE
1	4.94 V	51	0.00 V
2	4.94 V	52	4.40 V
3	4.92 V	53	4.38 V
4	4.92 V	54	0.00 V
5	1.32 V	55	4.39 V
6	4.92 V	56	4.43 V
7	4.92 V	57	-29.05 V
8	0.00 V	58	-26.42 V
9	4.87 V	59	-18.41 V
10	4.87 V	60	-29.08 V
11	4.87 V	61	-29.08 V
12	0.00 V	62	0.00 V
13	0.00 V	63	-29.08 V
14	0.00 V	64	-0.92 V
15	0.00 V	65	-0.96 V
16	0.00 V	66	-11.10 V
17	0.00 V	67	0.00 V
18	0.00 V	68	-23.60 V
19	0.00 V	69	-29.00 V
20	0.00 V	70	-23.60 V
21	0.00 V	71	0.00 V
22	4.52 V	72	0.00 V
23	4.41 V	73	-23.60 V
24	4.54 V	74	-26.20 V
25	0.00 V	75	-23.60 V
26	0.00 V	76	0.00 V
27	1.87 V	77	-26.40 V
28	4.05 V	78	0.00 V
29	4.07 V	79	-23.60 V
30	0.00 V	80	0.00 V
31	4.66 V	81	-23.61 V
32	0.23 V	82	-20.84 V
33	4.95 V	83	-10.43 V
34	4.95 V	84	-23.50 V
35	0.00 V	85	-26.40 V
36	0.00 V	86	-28.93 V
37	13.15 V	87	-26.40 V
38	13.15 V	88	-21.10 V
39	13.15 V	89	-25.12 V
40	0.00 V	90	-24.99 V
41	-23.60 V	91	-23.01 V
42	4.72 V	92	-25.00 V
43	4.41 V	93	-24.98 V
44	4.54 V	94	-25.00 V
45	0.00 V	95	-24.85 V
46	0.00 V	96	-24.92 V
47	0.00 V	97	-24.89 V
48	0.00 V	98	-24.82 V
49	4.54 V	99	-24.87 V
50	0.00 V	100	-24.63 V

IC 601	
PIN NO	VOLTAGE
1	0
2	0
3	0
4	4.98
5	4.95
6	4.96
7	4.99
8	4.96
9	4.96
10	4.99
11	4.96
12	4.96
13	4.96
14	4.96
15	4.96
16	4.96
17	4.99
18	4.96
19	4.96
20	4.96
21	4.96
22	4.98
23	9.95
24	0

IC 901	
PIN NO	VOLTAGE
1	58.3
2	24.85
3	12.79
4	-12.85
5	-24.75
6	-58.9
7	0
8	0
9	0
10	0
11	0
12	-57.4
13	57.6
14	0
15	0
16	-56.01
17	0
18	0

IC 851	
PIN NO	VOLTAGE
1	5.06
2	12.83
3	19.6
4	0
5	18.28
6	9.92
7	8.4

IC1			
PIN NO	VOLTAGE	PIN NO	VOLTAGE
1	3.2	51	0
2	1.61	52	0
3	1.61	53	0
4	1.6	54	0
5	1.61	55	0
6	3.06	56	0
7	1.65	57	0
8	1.65	58	0
9	1.65	59	0
10	1.65	60	3.2
11	1.48	61	0
12	0	62	0
13	1.65	63	0.53
14	0	64	0
15	1.65	65	5.18
16	1.47	66	5.18
17	1.48	67	4.68
18	0	68	0
19	0	69	0
20	0	70	0
21	1.6	71	0
22	0	72	0
23	1.61	73	0
24	1.61	74	4.68
25	0	75	4.68
26	0	76	3.01
27	3.2	77	0
28	0	78	1.12
29	3.2	79	0
30	0	80	3.2
31	0		
32	1.59		
33	1.6		
34	3.2		
35	0		
36	0		
37	0		
38	0		
39	0		
40	0		
41	3.61		
42	0		
43	0		
44	1.8		
45	3.8		
46	0		
47	1.45		
48	1.49		
49	3.19		
50	3.79		

IC101	
PIN NO	VOLTAGE
1	0
2	0
3	0
4	2
5	2
6	1.32
7	0
8	0.6
9	3.48
10	3.44
11	0
12	0
13	6.9
14	4.18
15	0
16	3.45
17	0.6
18	0
19	2.59
20	2
21	2
22	0
23	0
24	0

IC2	
PIN NO	VOLTAGE
1	2.1
2	2.2
3	2.1
4	2.2
5	2.1
6	2.2
7	0
8	4.37
9	5.02
10	3.2
11	1.62
12	1.65
13	1.62
14	1.65
15	1.62
16	0
17	1.62
18	1.64
19	4.71
20	4.71
21	3.92
22	3.11
23	3.1
24	2.5
25	1.65
26	0
27	5.02
28	8.68
29	5.02
30	0.69
31	0.71
32	0
33	0
34	0
35	2.11
36	2.2

IC 503	
PIN NO	VOLTAGE
1	2.55
2	2.55
3	2.55
4	0
5	2.49
6	2.69
7	1.34
8	12.66

-MEMO-

CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT

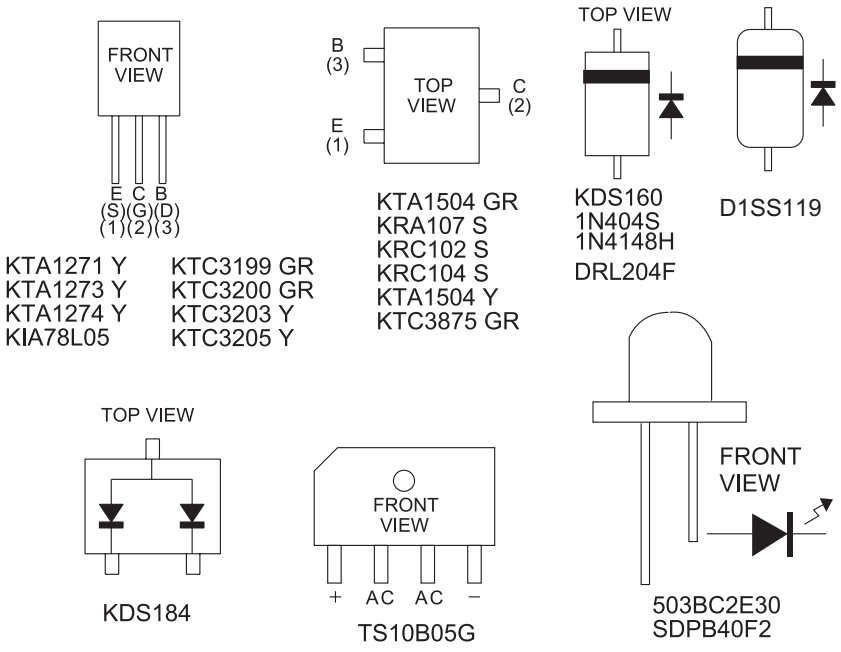
[1] Notes on schematic diagram

- Resistor:
  To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with “Fusible” is a fuse type.
- Capacitor:
  To indicate the unit of capacitor, a symbol P is used: this symbol P means pico-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression “capacitance/withstand voltage” is used.
  (CH), (TH), (RH), (UJ): Temperature compensation
  (ML): Mylar type
  (P.P.): Polypropylene type
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.
  1. In the tuner section,
     indicates AM
     indicates FM stereo
  2. In the main section, a tape is being played back.
  3. In the deck section, a tape is being played back.
     ( ) indicates the record state.
  4. In the power section, a tape is being played back.
  5. In the CD section, the CD is stopped.
- Parts marked with “⚠” (⊏ ニ ニ ニ コ) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF. NO	DESCRIPTION	POSITION
JOG701	VOLUME	MAX—MIN
SW701	POWER ON /STAND-BY	ON—OFF
SW702	CD	ON—OFF
SW703	TUNER (BAND)	ON—OFF
SW704	AUX	ON—OFF
SW705	TAPE	ON—OFF
SW707	PLAY	ON—OFF
SW708	FAST FORWARD/PRESET UP	ON—OFF

REF. NO	DESCRIPTION	POSITION
SW709	FAST REWIND/PRESET DOWN	ON—OFF
SW710	STOP	ON—OFF
SW711	DISC 1	ON—OFF
SW712	DISC 2	ON—OFF
SW713	DISC 3	ON—OFF
SW714	DISC 4	ON—OFF
SW715	DISC 5	ON—OFF
SW716	OPEN/CLOSE	ON—OFF

[2] Types of transistor and LED



[3] Schematic diagram

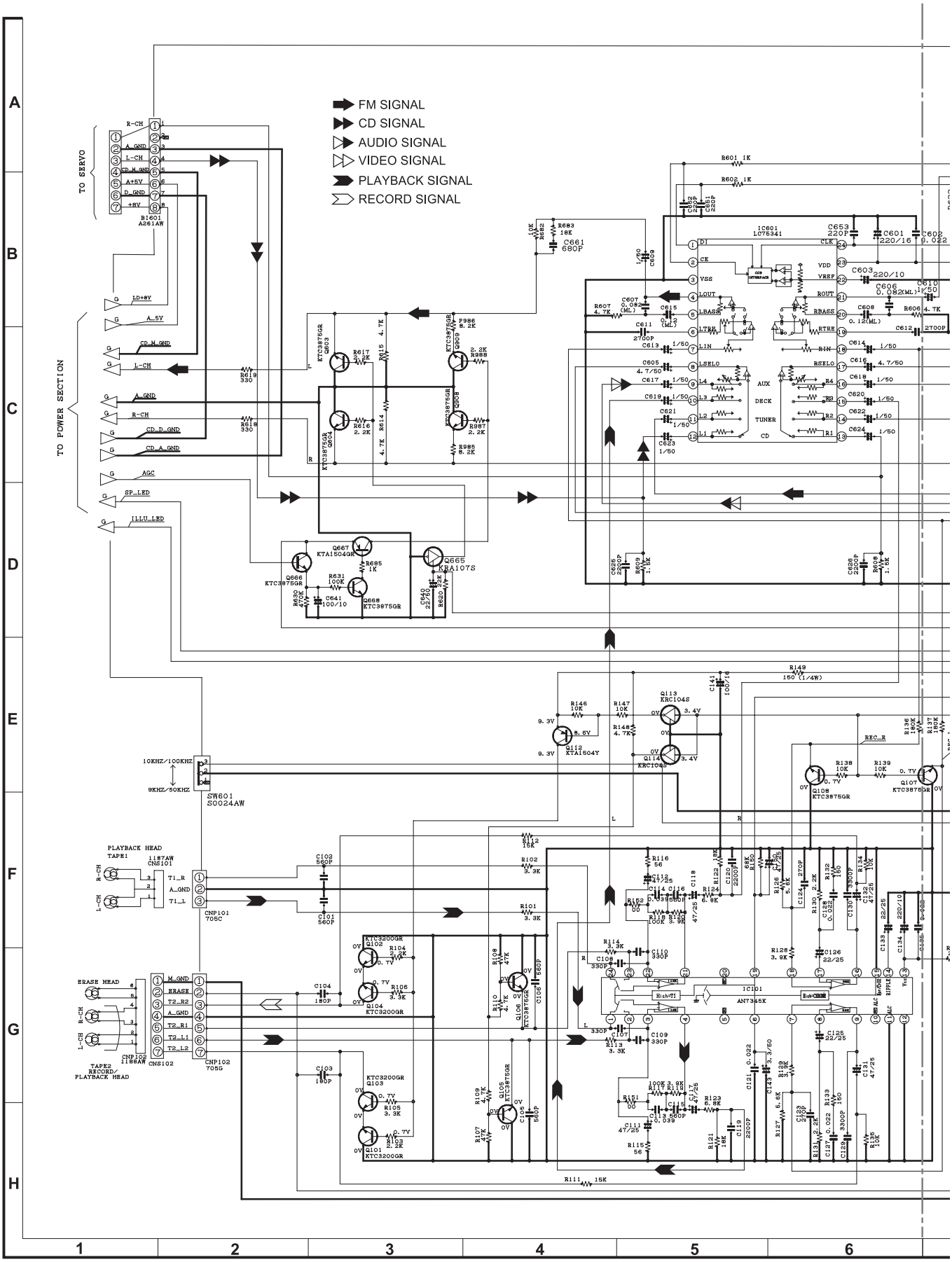


Figure 6-2: MAIN SCHEMATIC DIAGRAM (1/2)

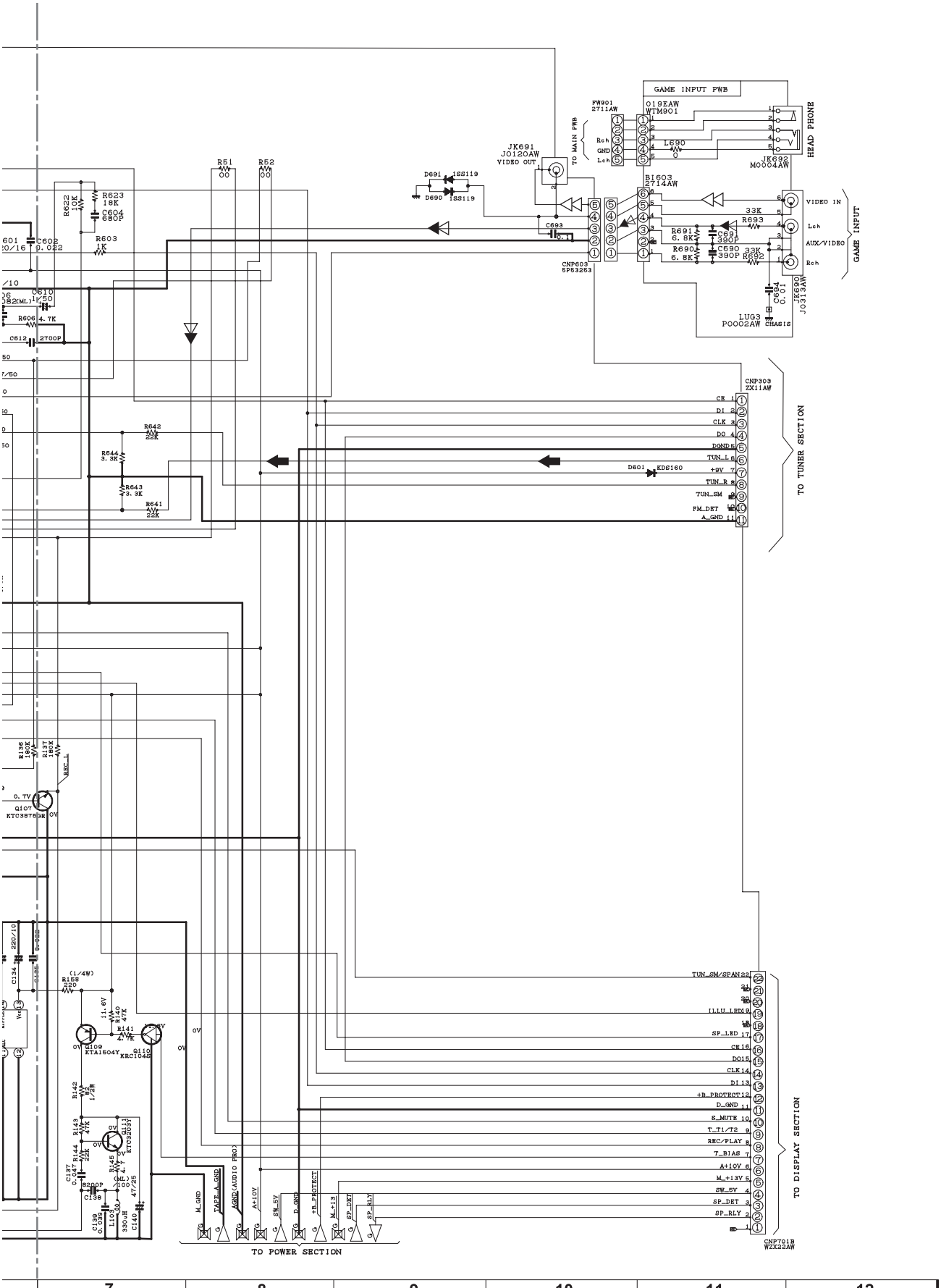


Figure 6-3: MAIN SCHEMATIC DIAGRAM (2/8)

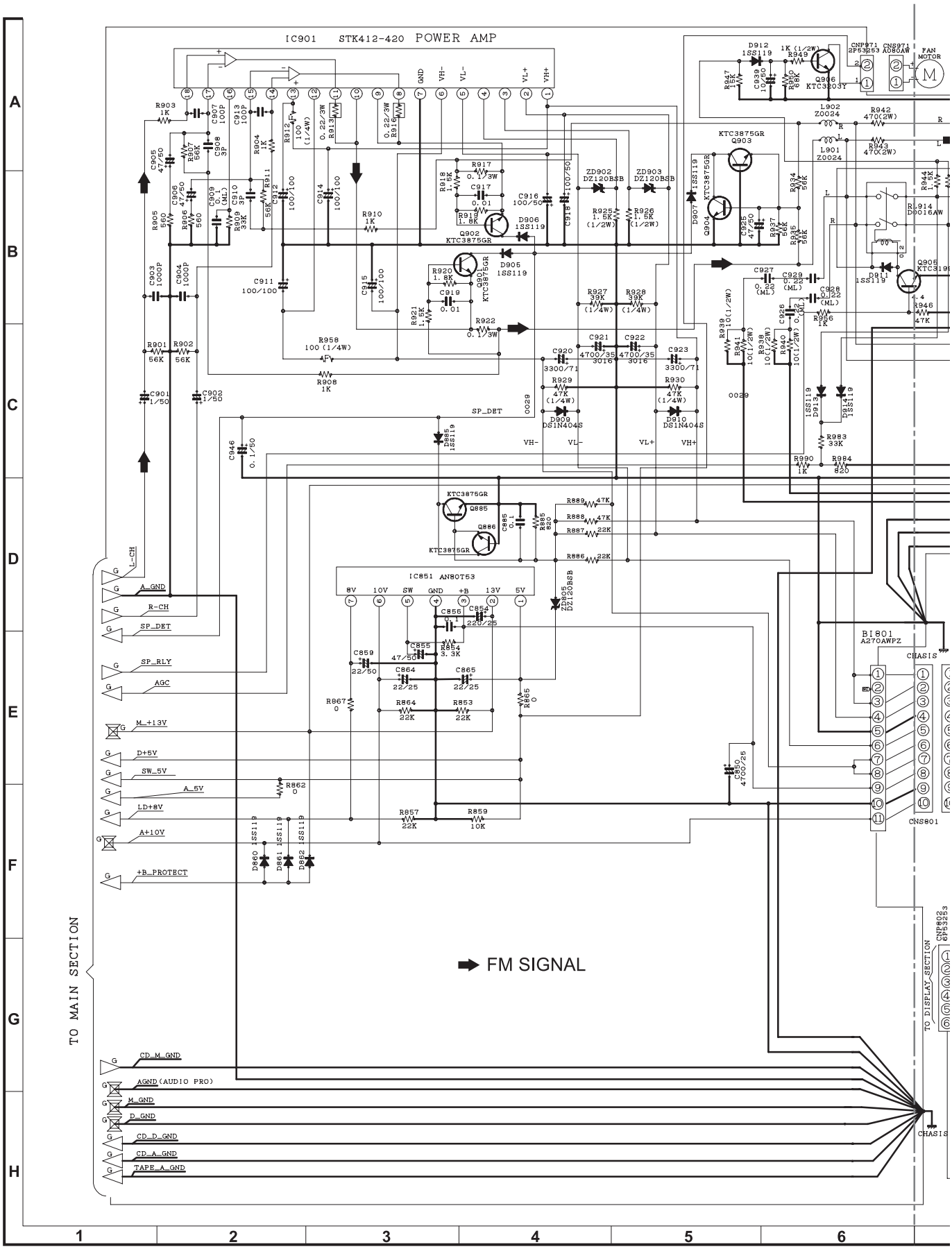


Figure 6-4: POWER SCHEMATIC DIAGRAM (3/8)

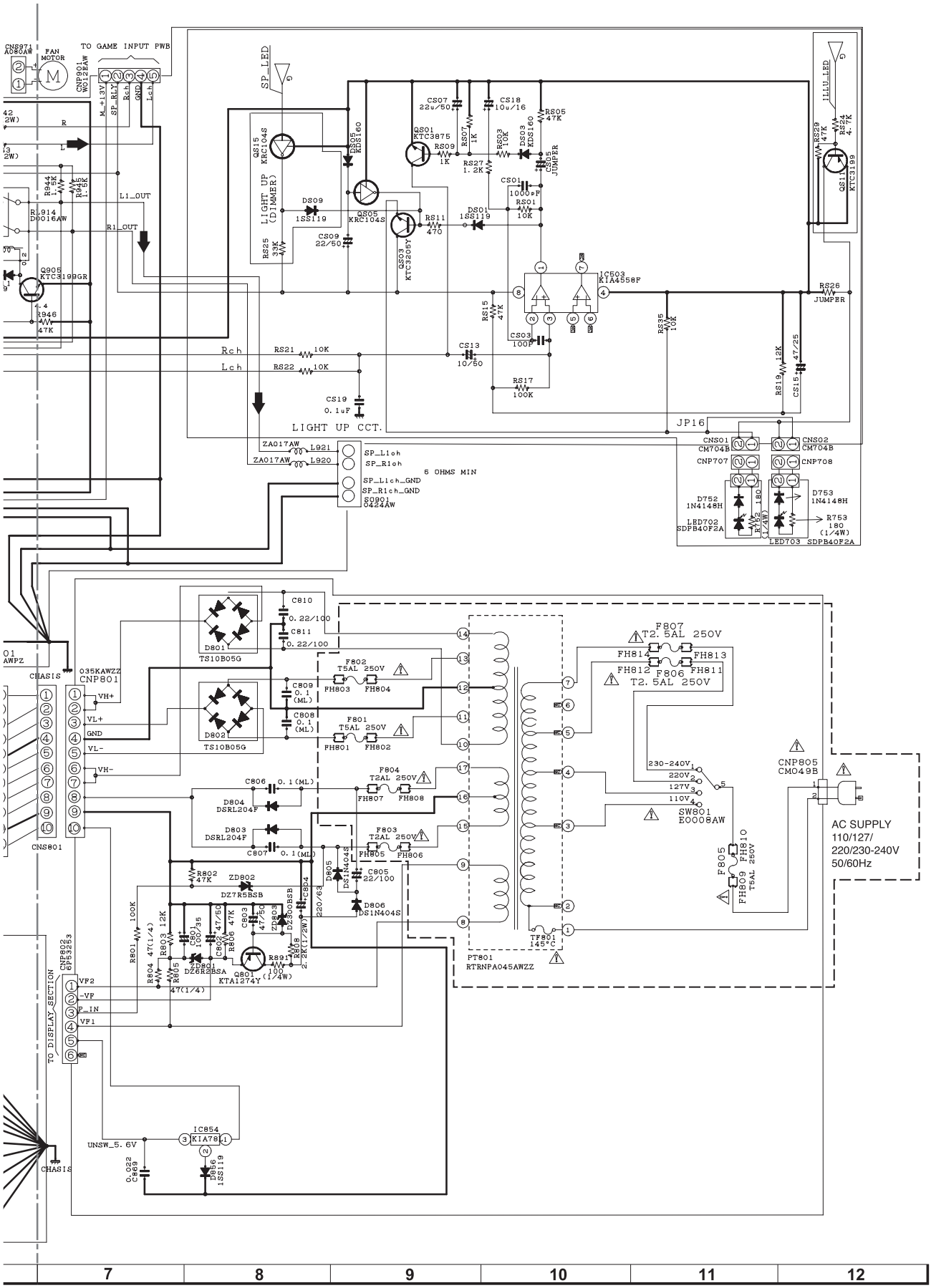


Figure 6-5: POWER SCHEMATIC DIAGRAM (4/8)

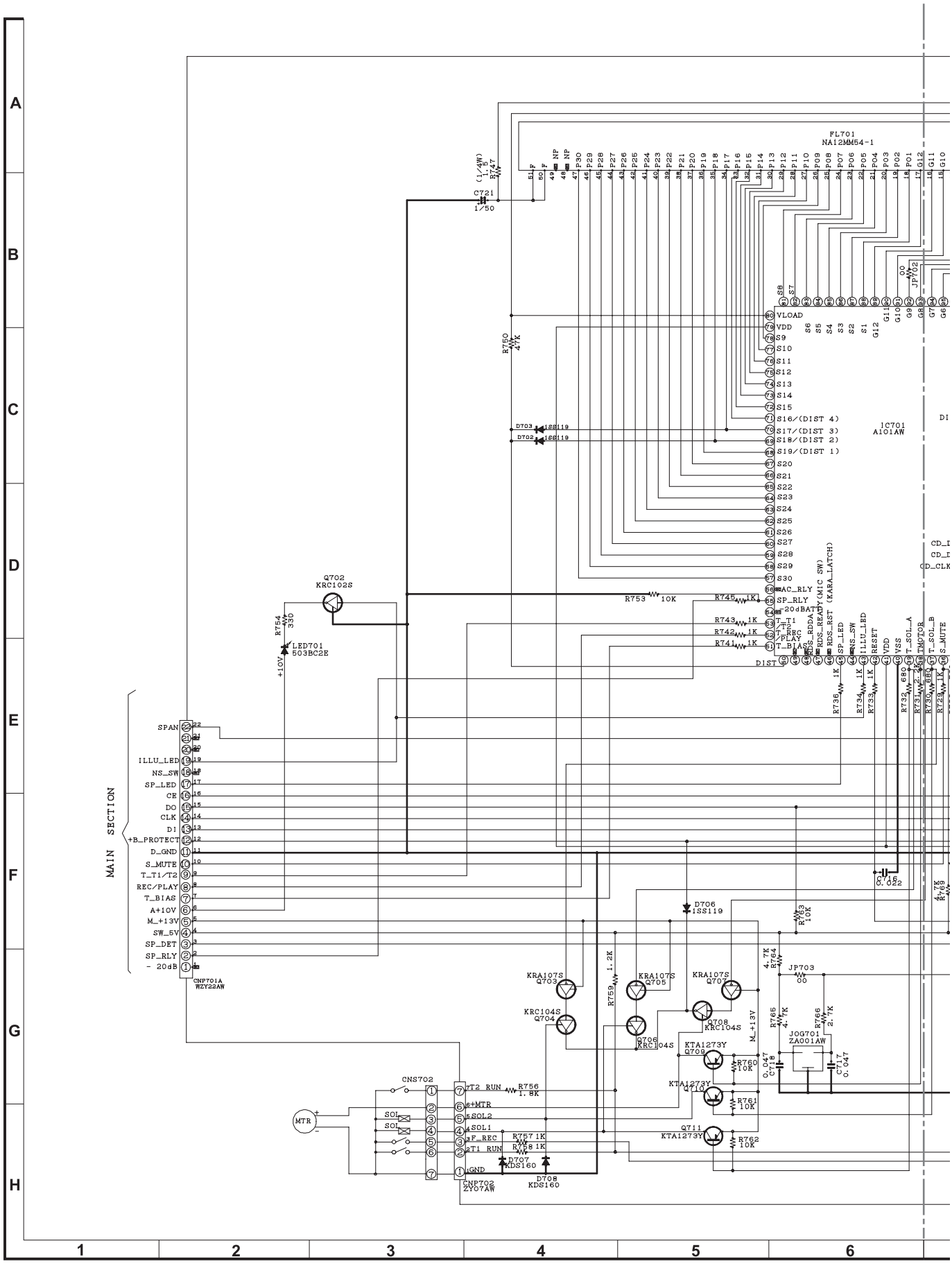


Figure 6-6: DISPLAY SCHEMATIC DIAGRAM (5/8)

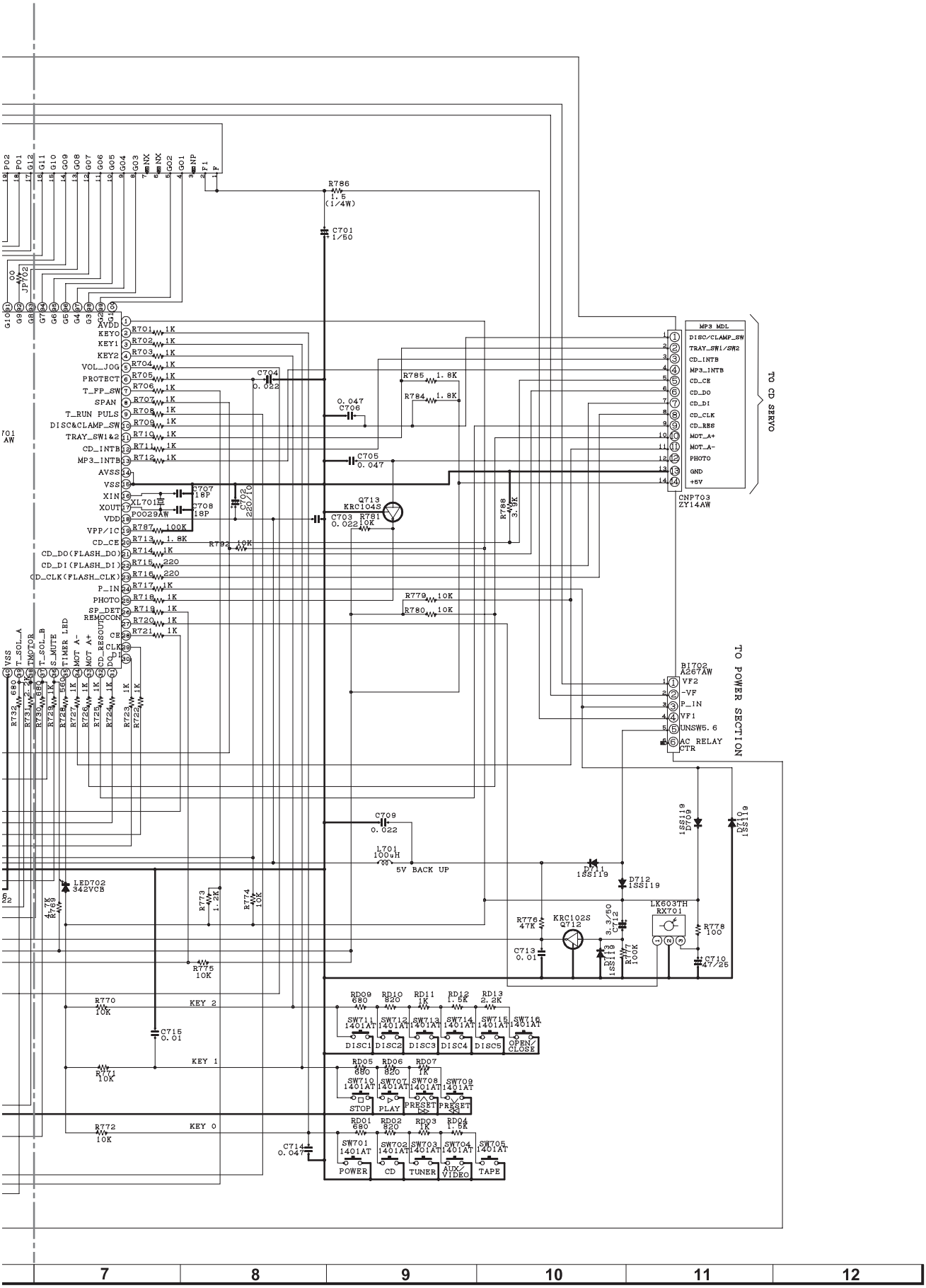


Figure 6-7: DISPLAY SCHEMATIC DIAGRAM (6/8)

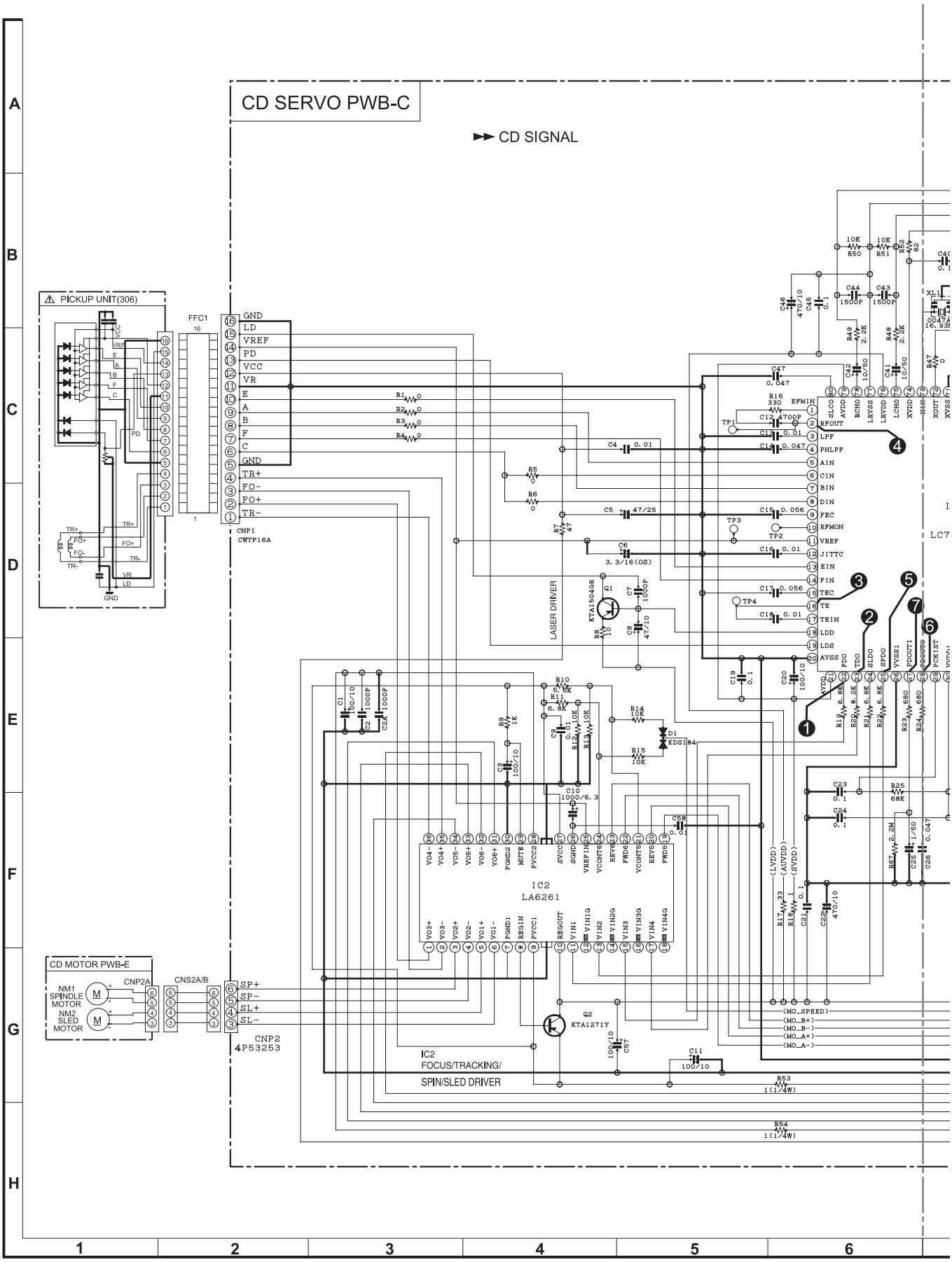
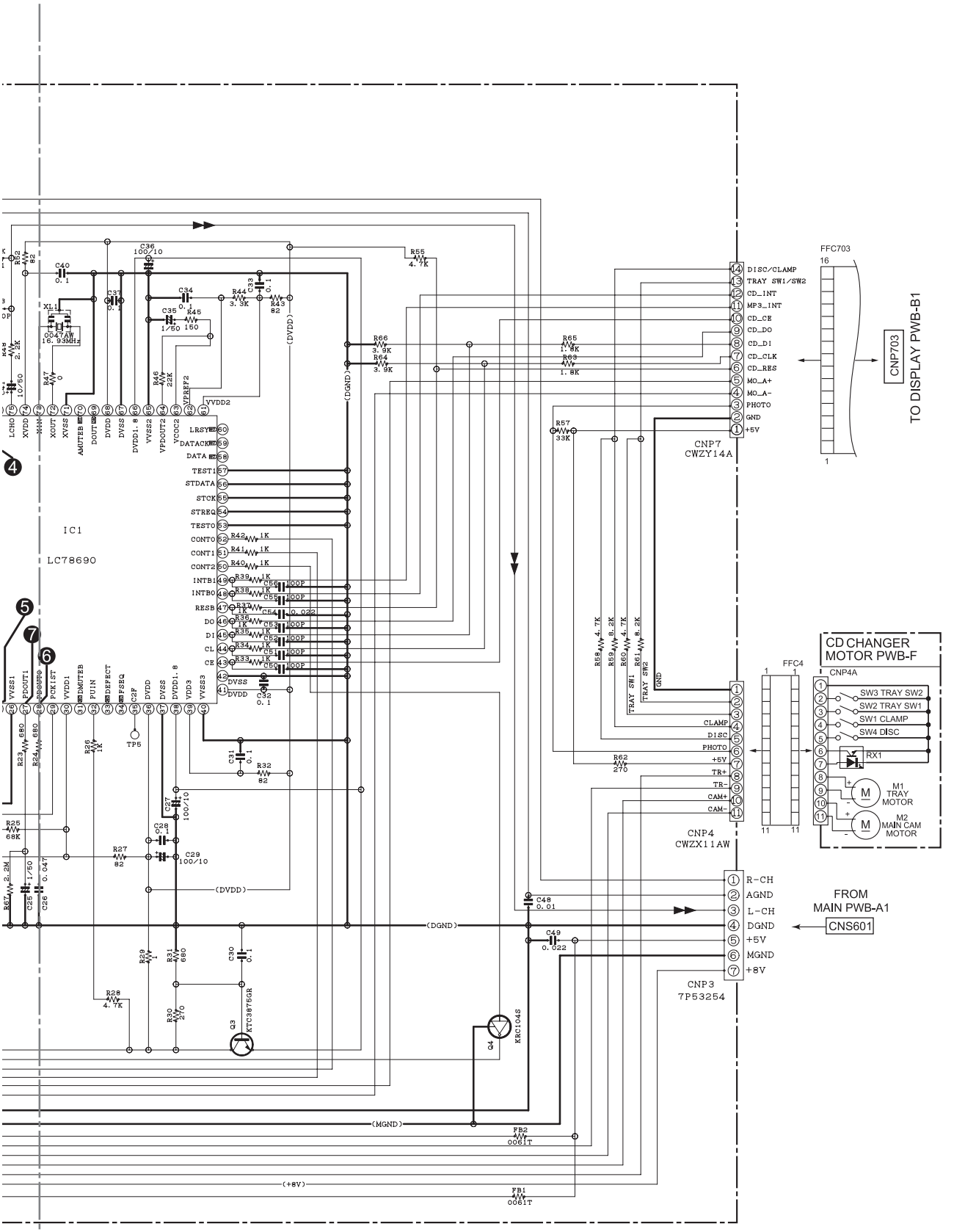


Figure 6-8: CD SERVO SCHEMATIC DIAGRAM (7/8)



The number ❶ to ❼ are waveform number shown in page 5-1

7	8	9	10	11	12

Figure 6-9: CD SERVO SCHEMATIC DIAGRAM (8/8)

[4] Wiring side of PWB

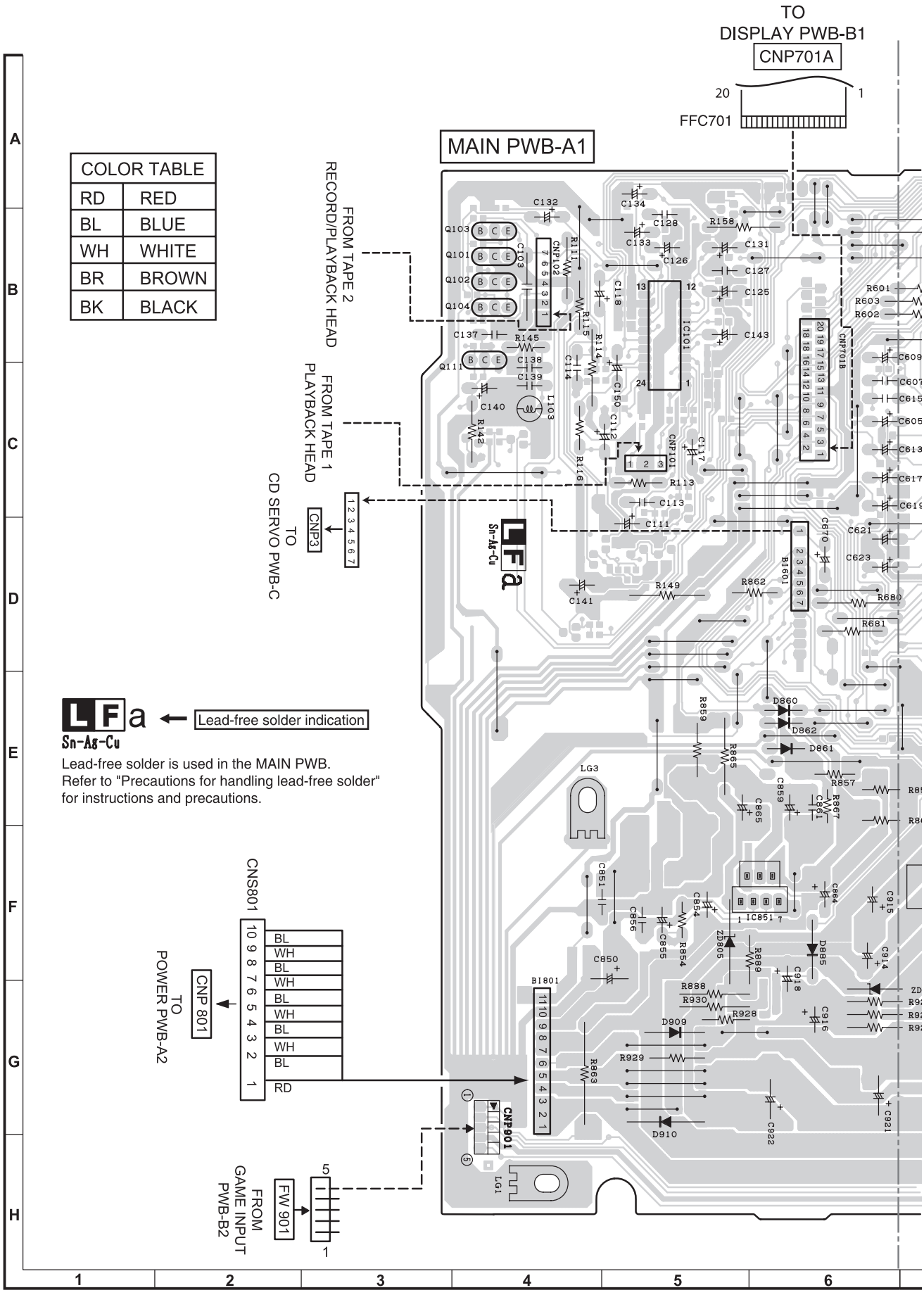


Figure 6-10: WIRING SIDE OF MAIN PWB (TOP VIEW) (1/15)

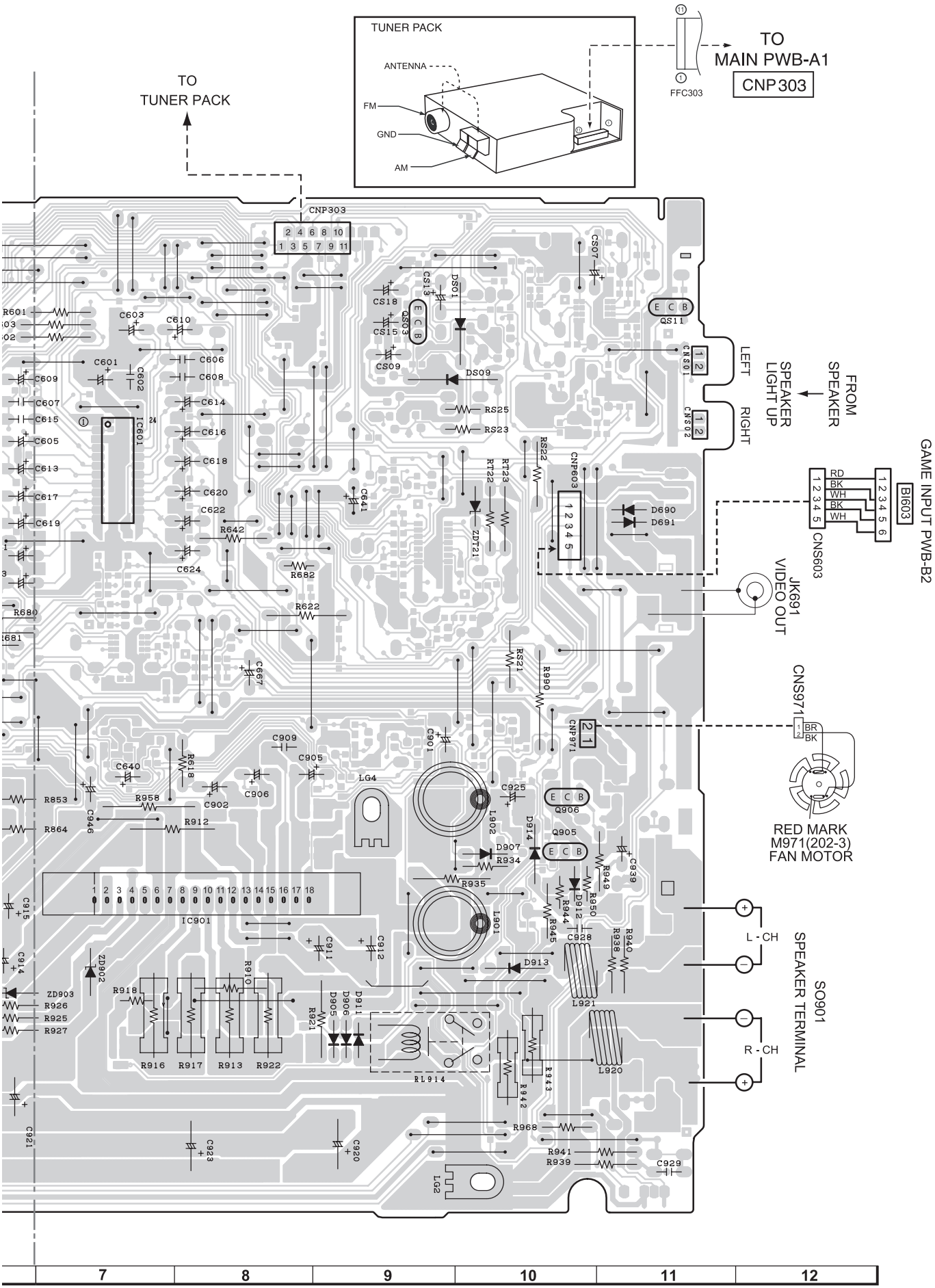


Figure 6-11: WIRING SIDE OF MAIN PWB (TOP VIEW) (2/15)

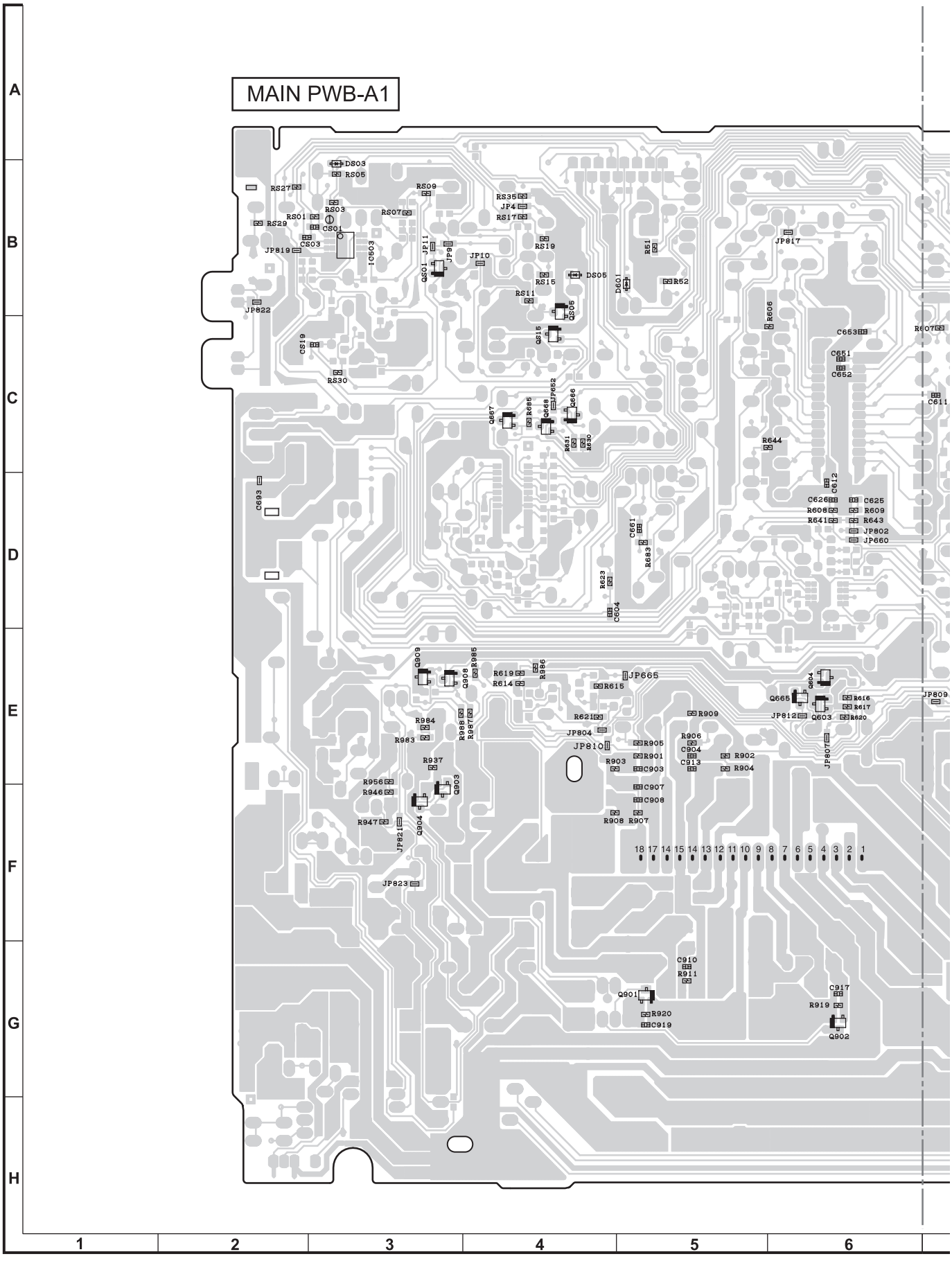
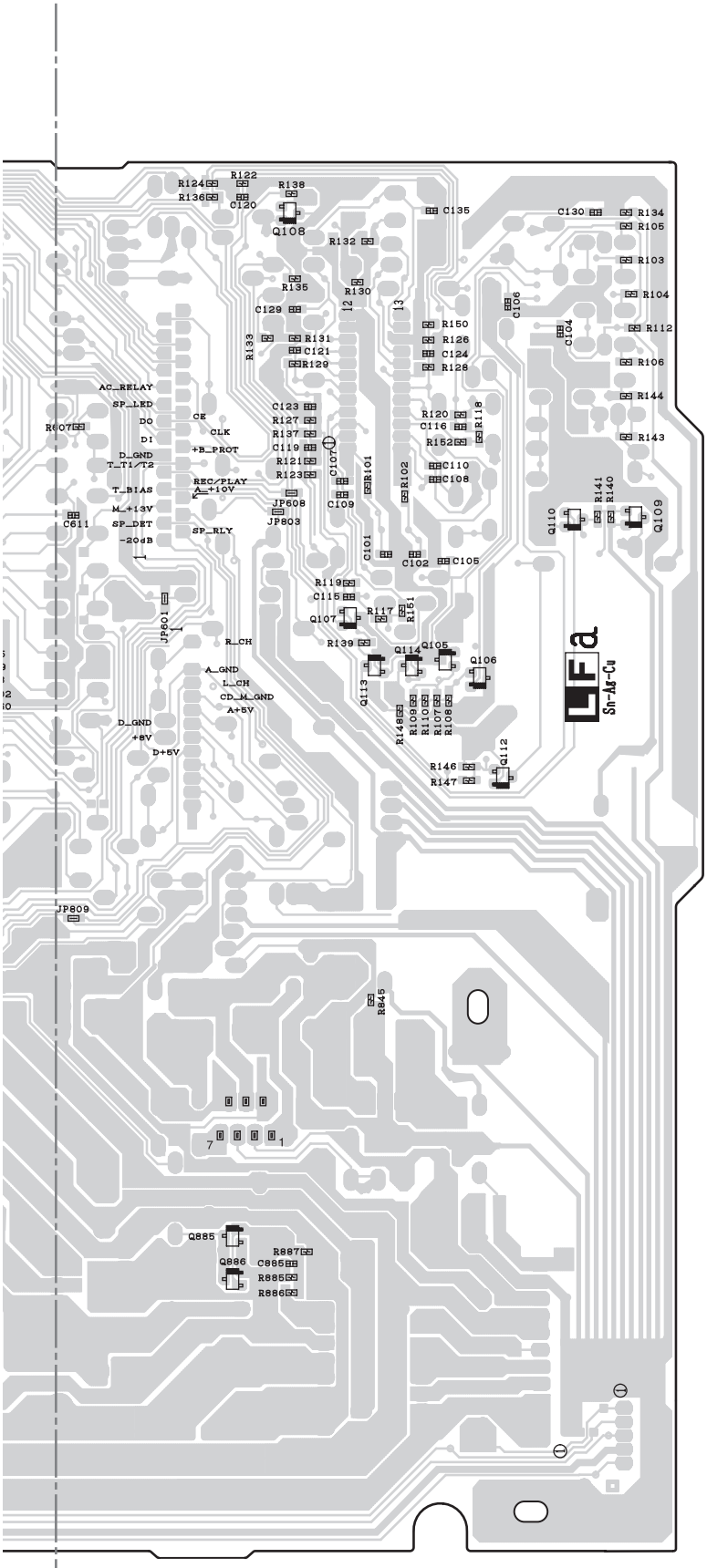


Figure 6-12: WIRING SIDE OF MAIN PWB (BOTTOM VIEW) (3/15)



LFa ← Lead-free solder indication
Sn-Ag-Cu

Lead-free solder is used in the MAIN PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

7	8	9	10	11	12

Figure 6-13: WIRING SIDE OF MAIN PWB (BOTTOM VIEW) (4/15)

-**MEMO**-

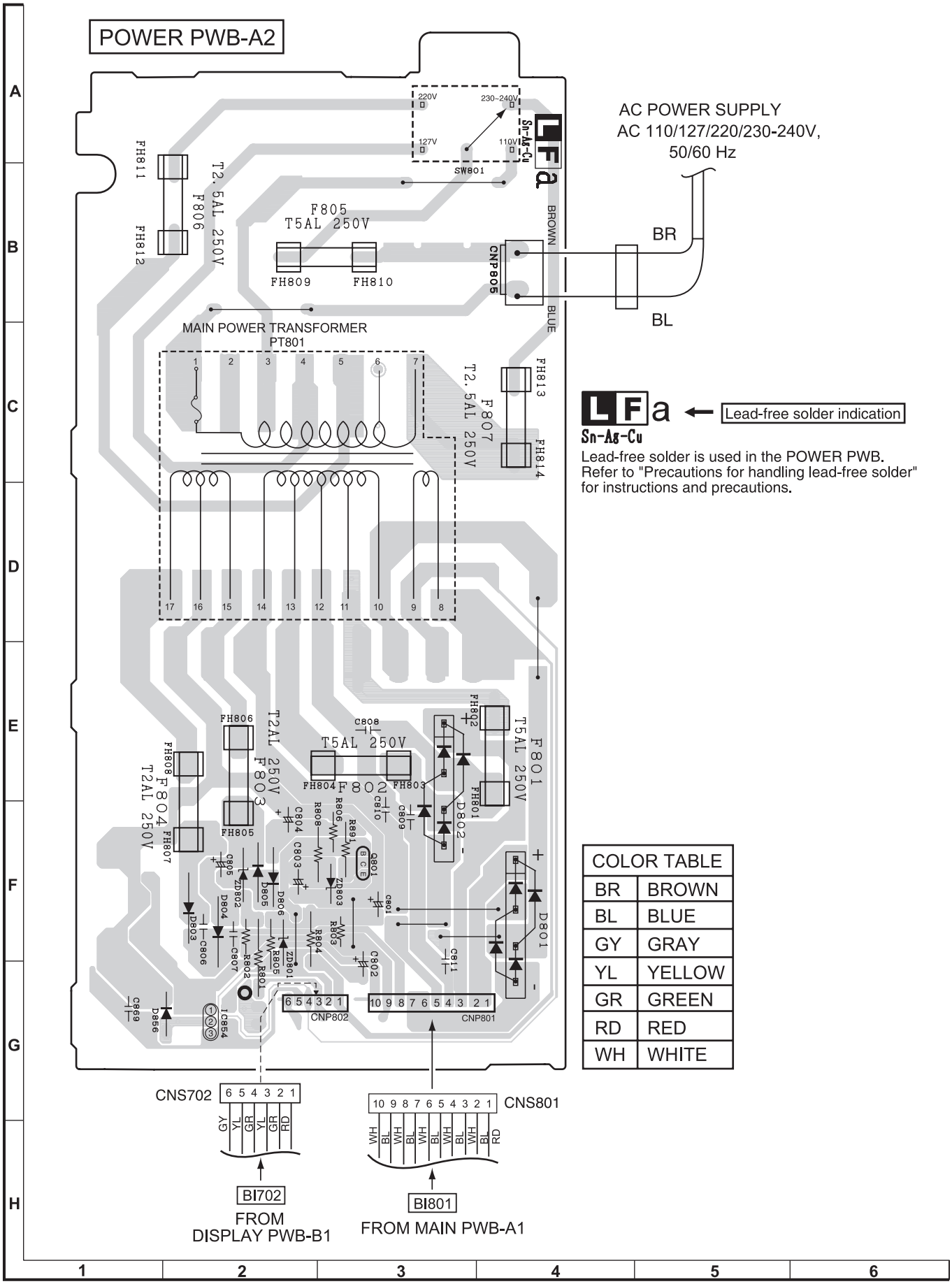
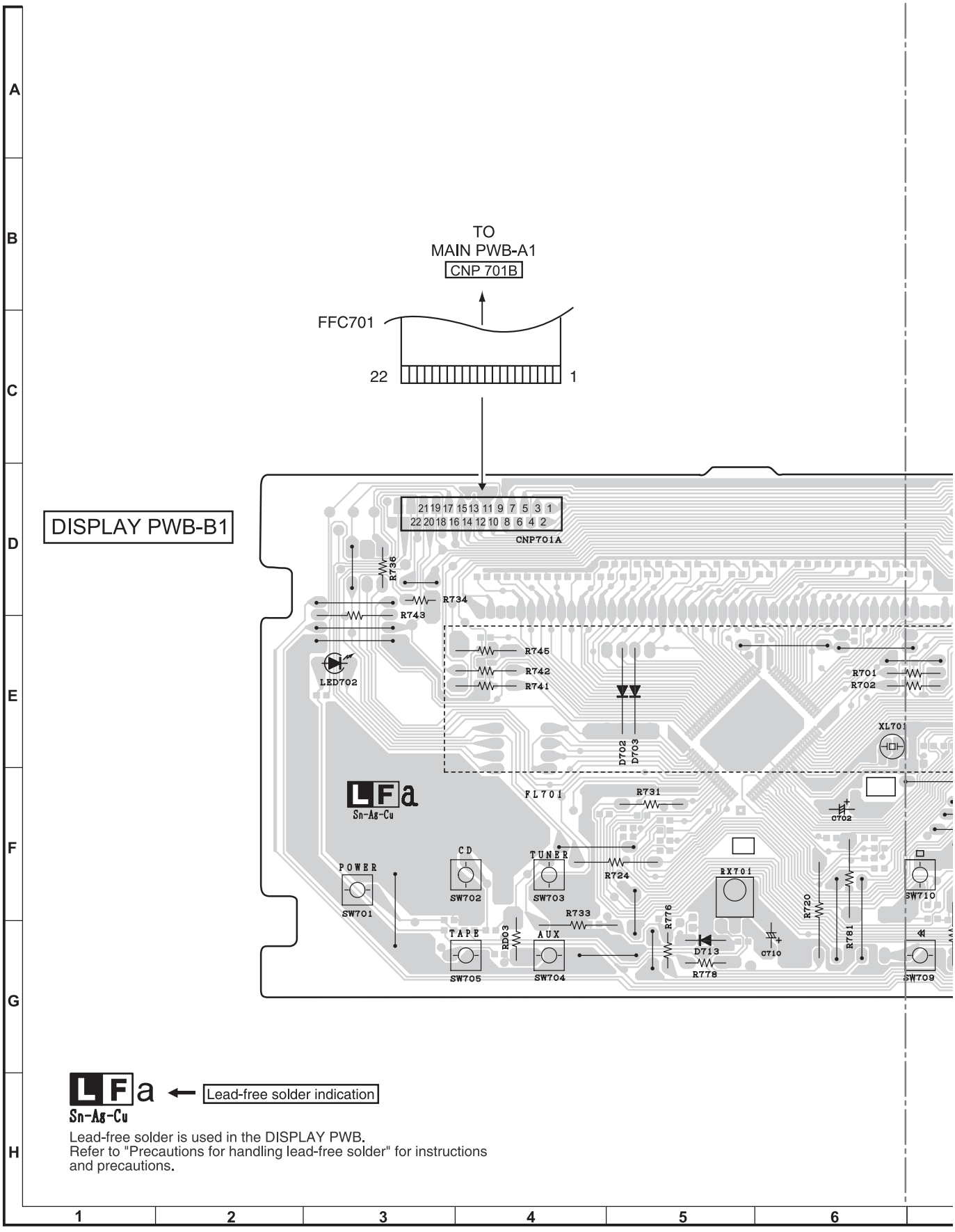


Figure 6-14: WIRING SIDE OF POWER PWB (5/15)



LFa ← Lead-free solder indication
Sn-Ag-Cu

Lead-free solder is used in the DISPLAY PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

Figure 6-15: WIRING SIDE OF DISPLAY PWB (TOP VIEW) (6/15)

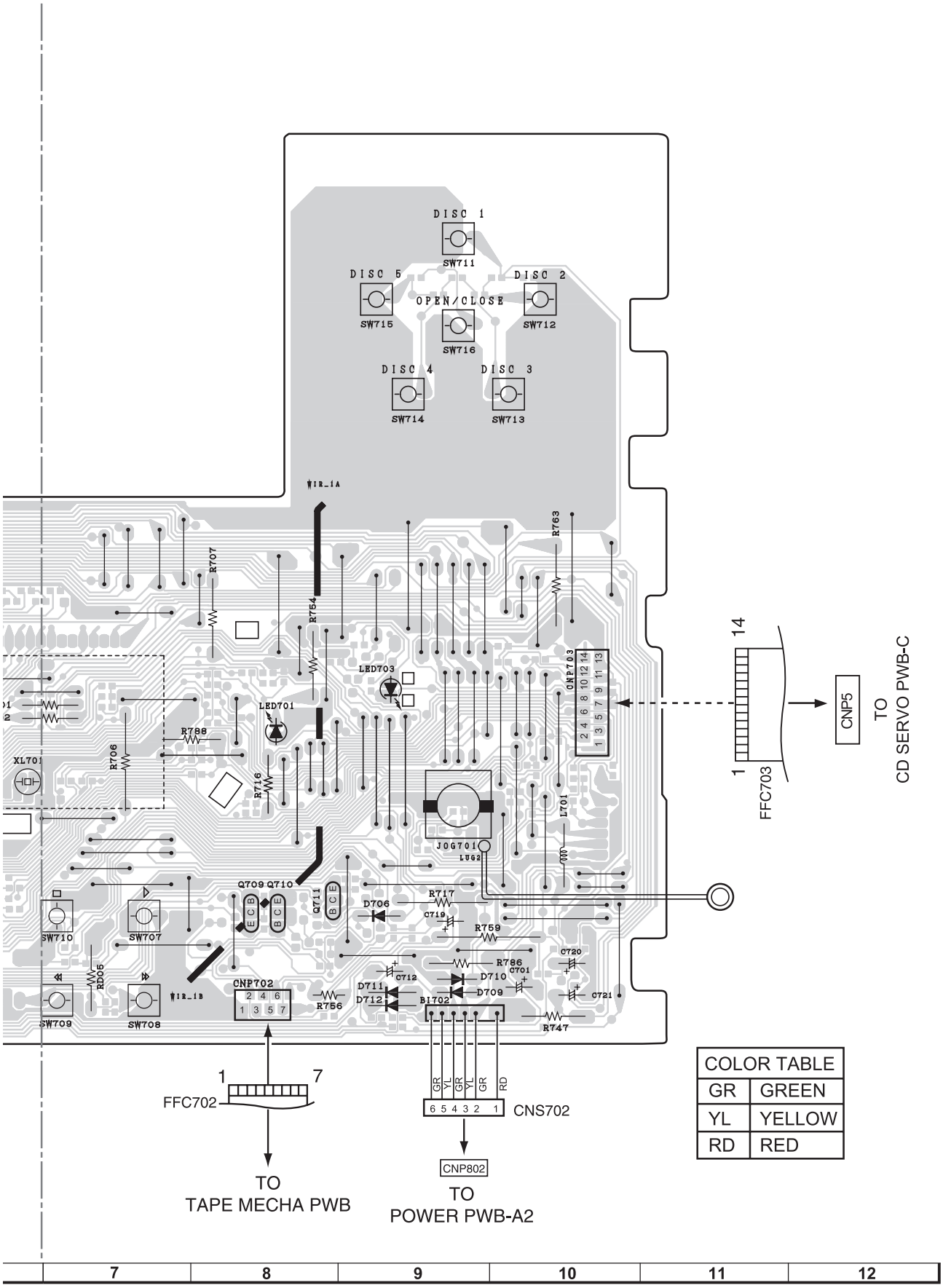


Figure 6-16: WIRING SIDE OF DISPLAY PWB (TOP VIEW) (7/15)

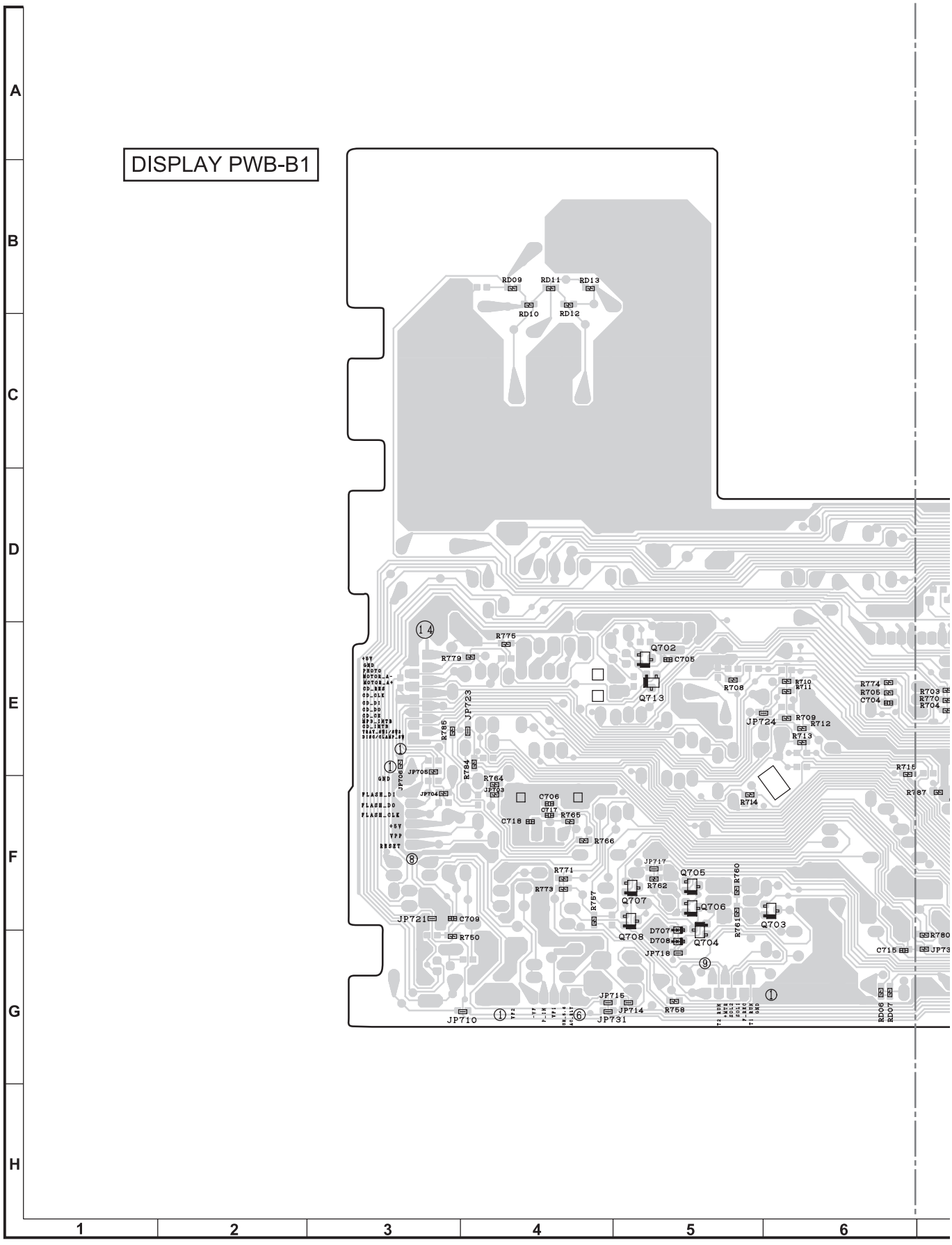
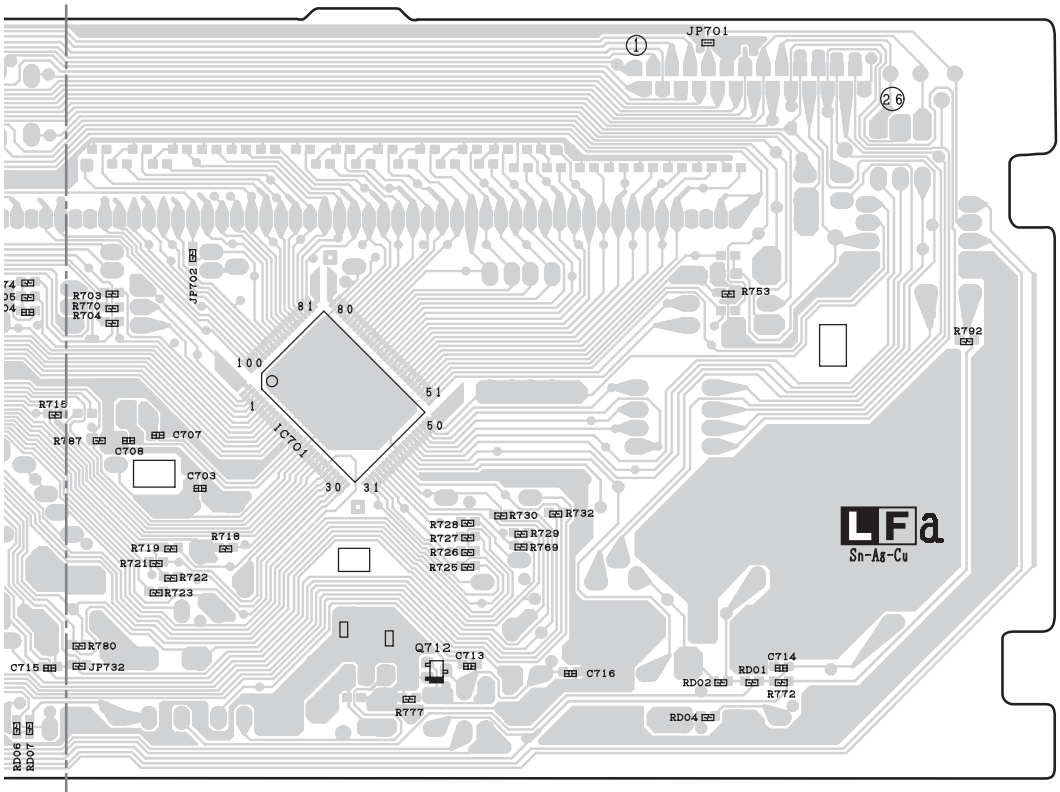


Figure 6-17: WIRING SIDE OF DISPLAY PWB (BOTTOM VIEW) (8/15)

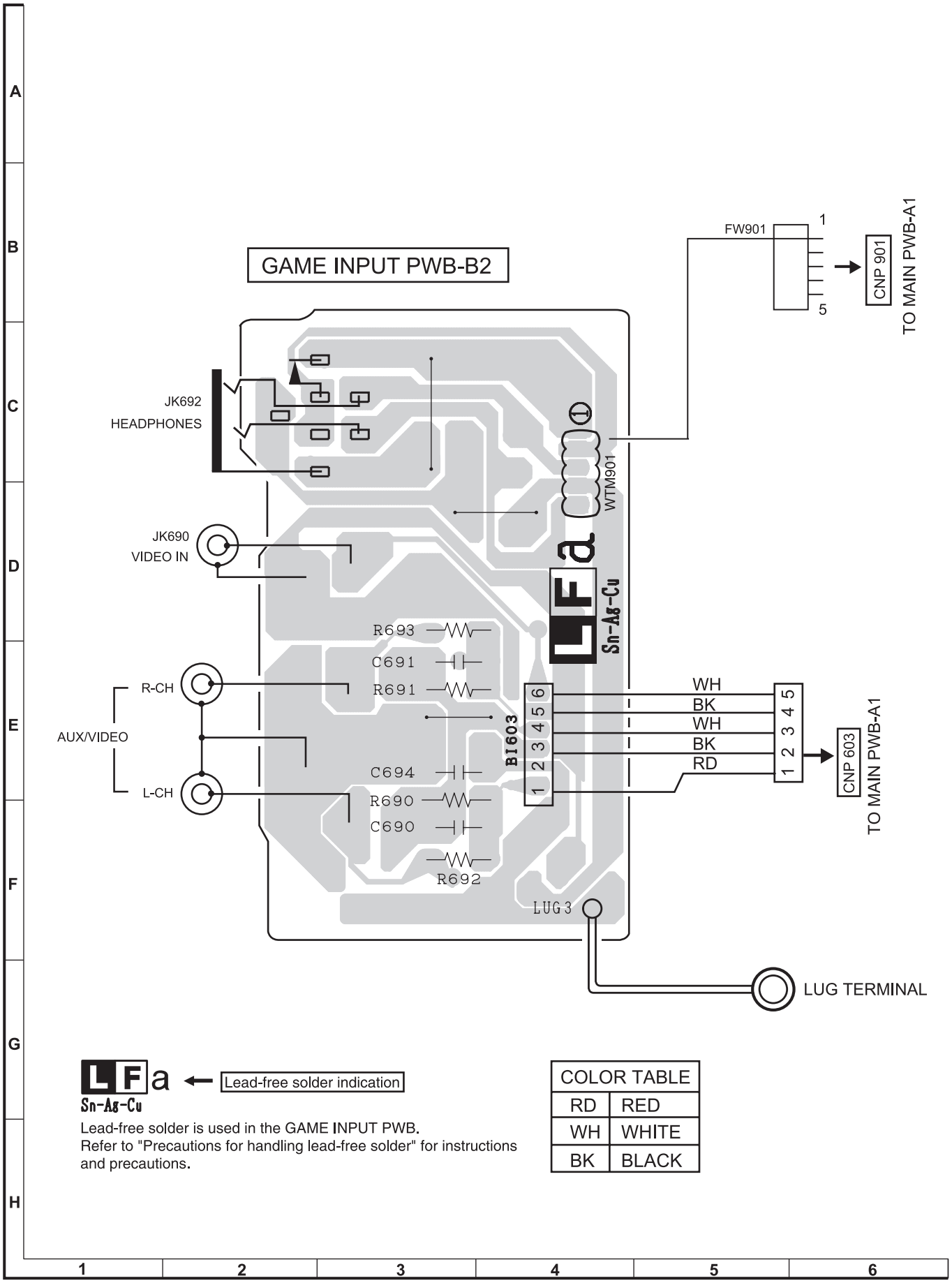


LFa ← Lead-free solder indication
Sn-Ag-Cu

Lead-free solder is used in the DISPLAY PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

7	8	9	10	11	12

Figure 6-18: WIRING SIDE OF DISPLAY PWB (BOTTOM VIEW) (9/15)



LFa ← Lead-free solder indication
Sn-Ag-Cu

Lead-free solder is used in the GAME INPUT PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

COLOR TABLE	
RD	RED
WH	WHITE
BK	BLACK

Figure 6-19: WIRING SIDE OF GAME INPUT PWB (TOP VIEW) (10/15)

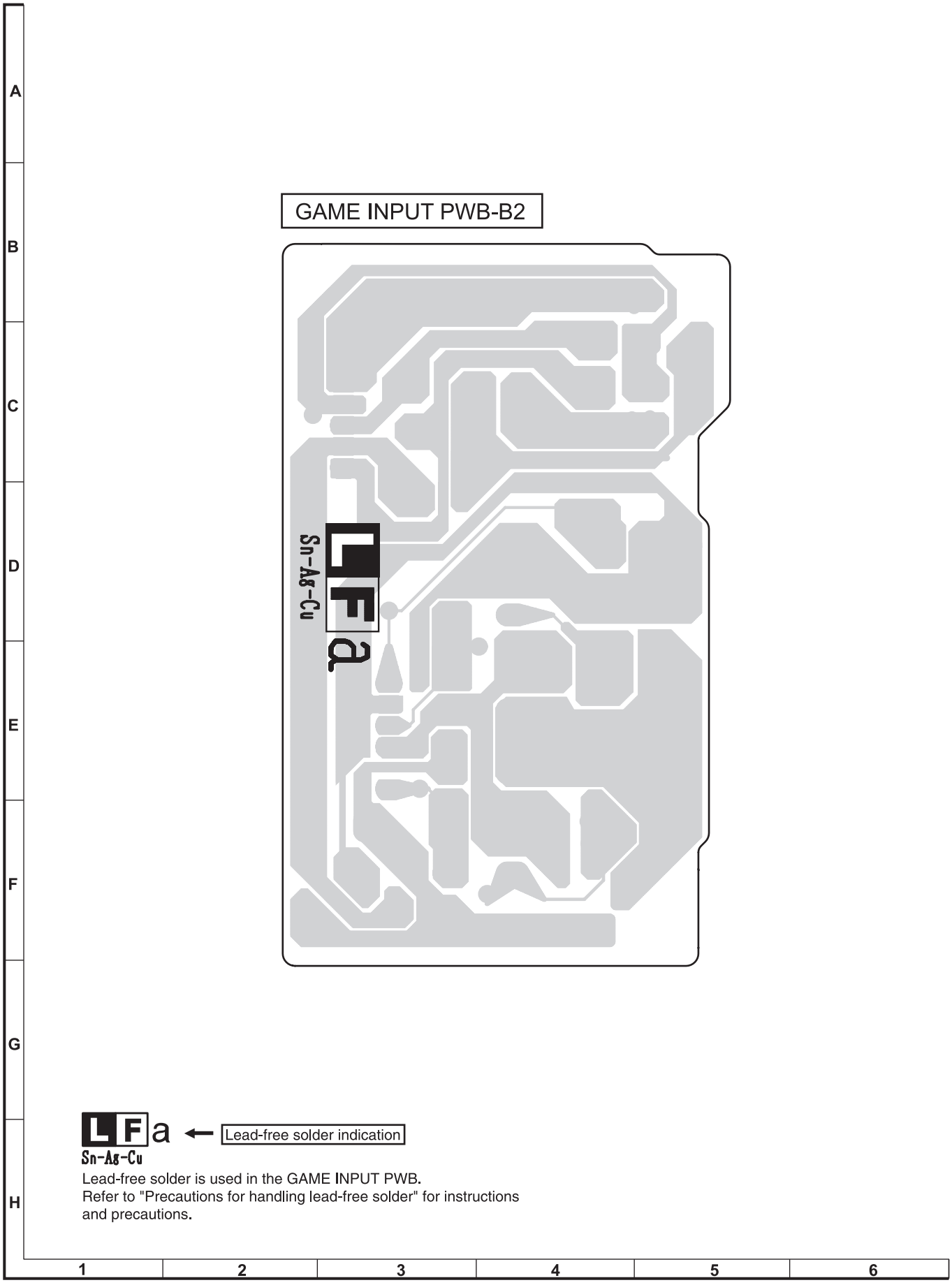


Figure 6-20: WIRING SIDE OF GAME INPUT PWB (BOTTOM VIEW) (11/15)

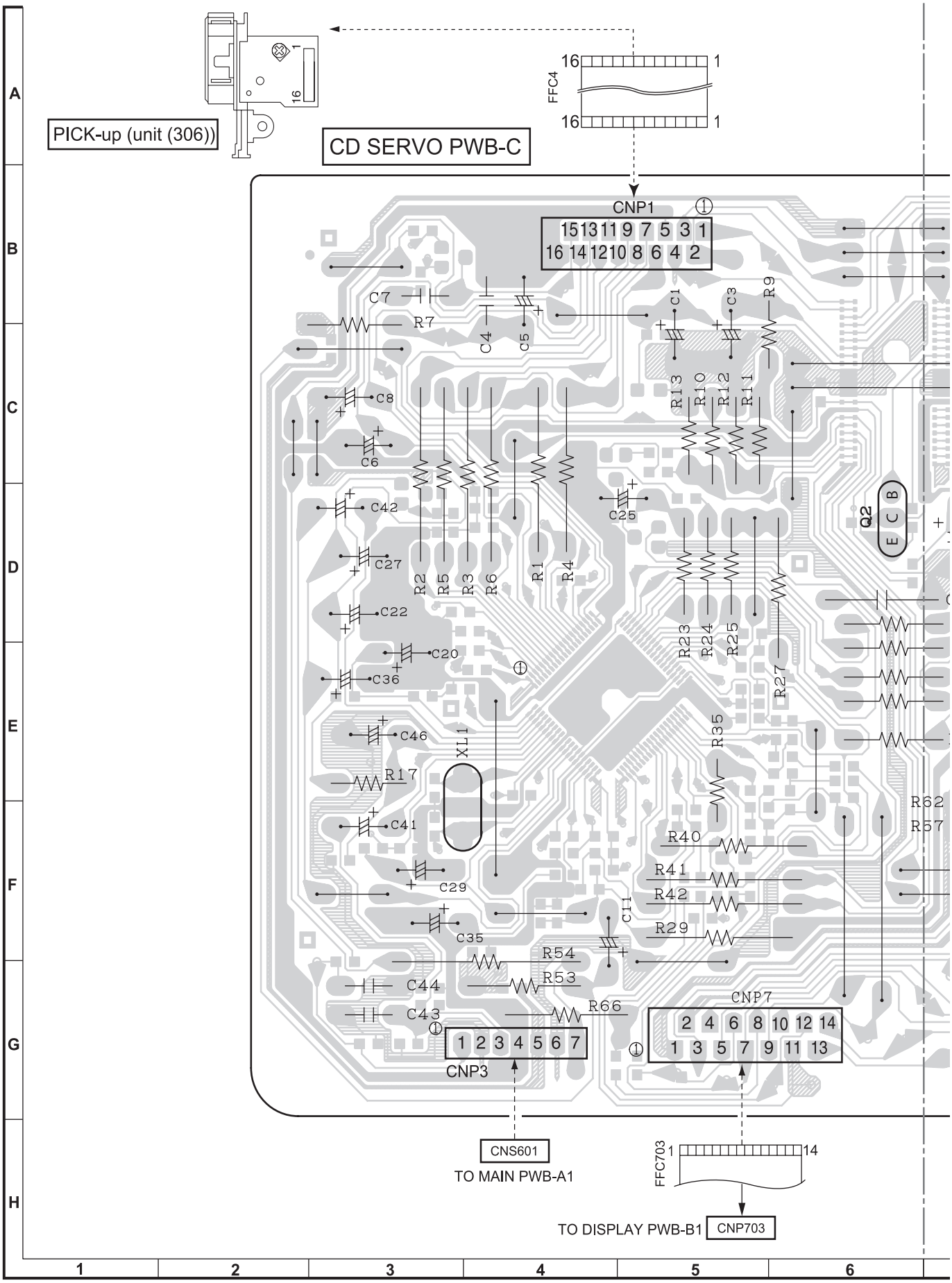
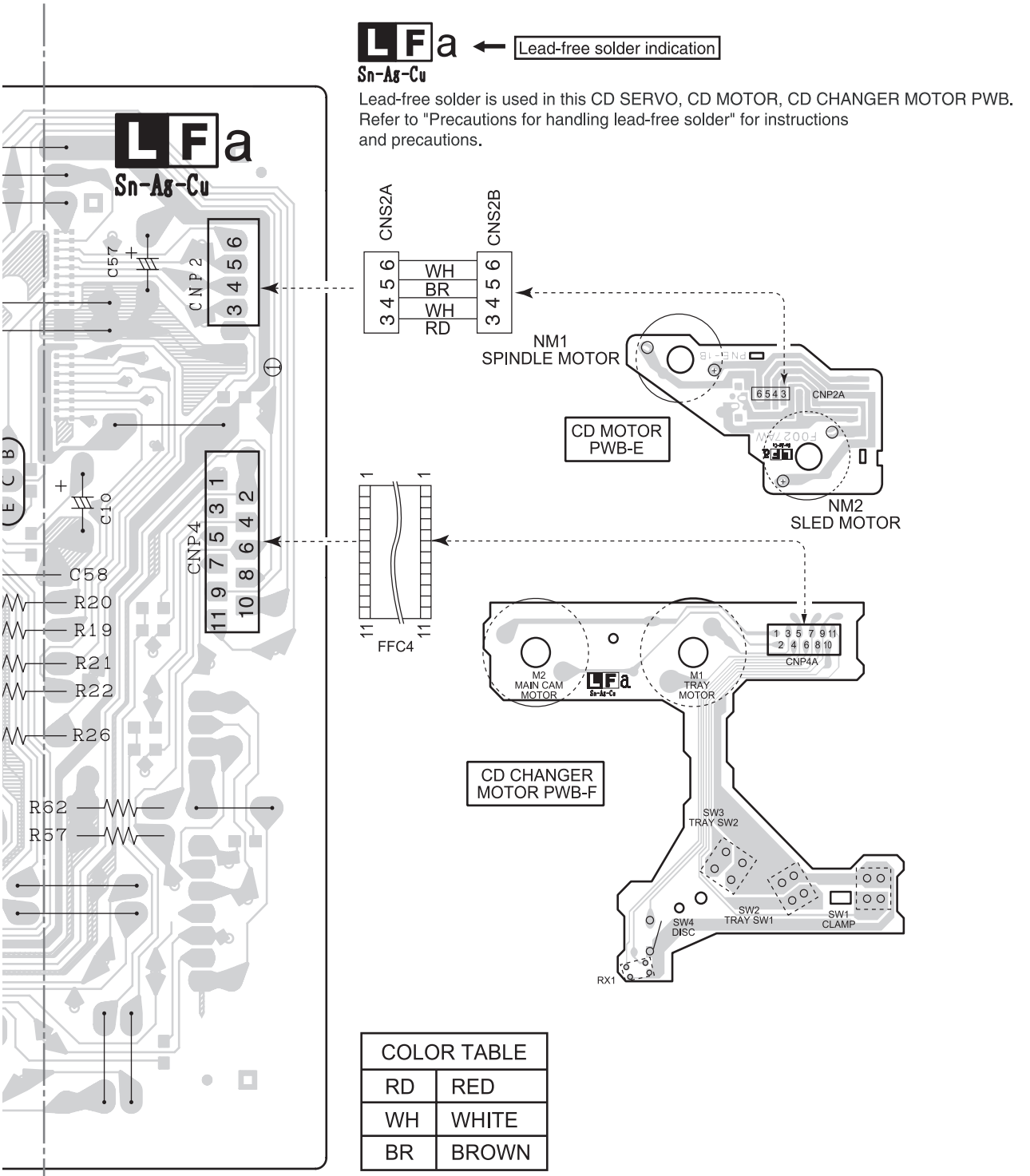


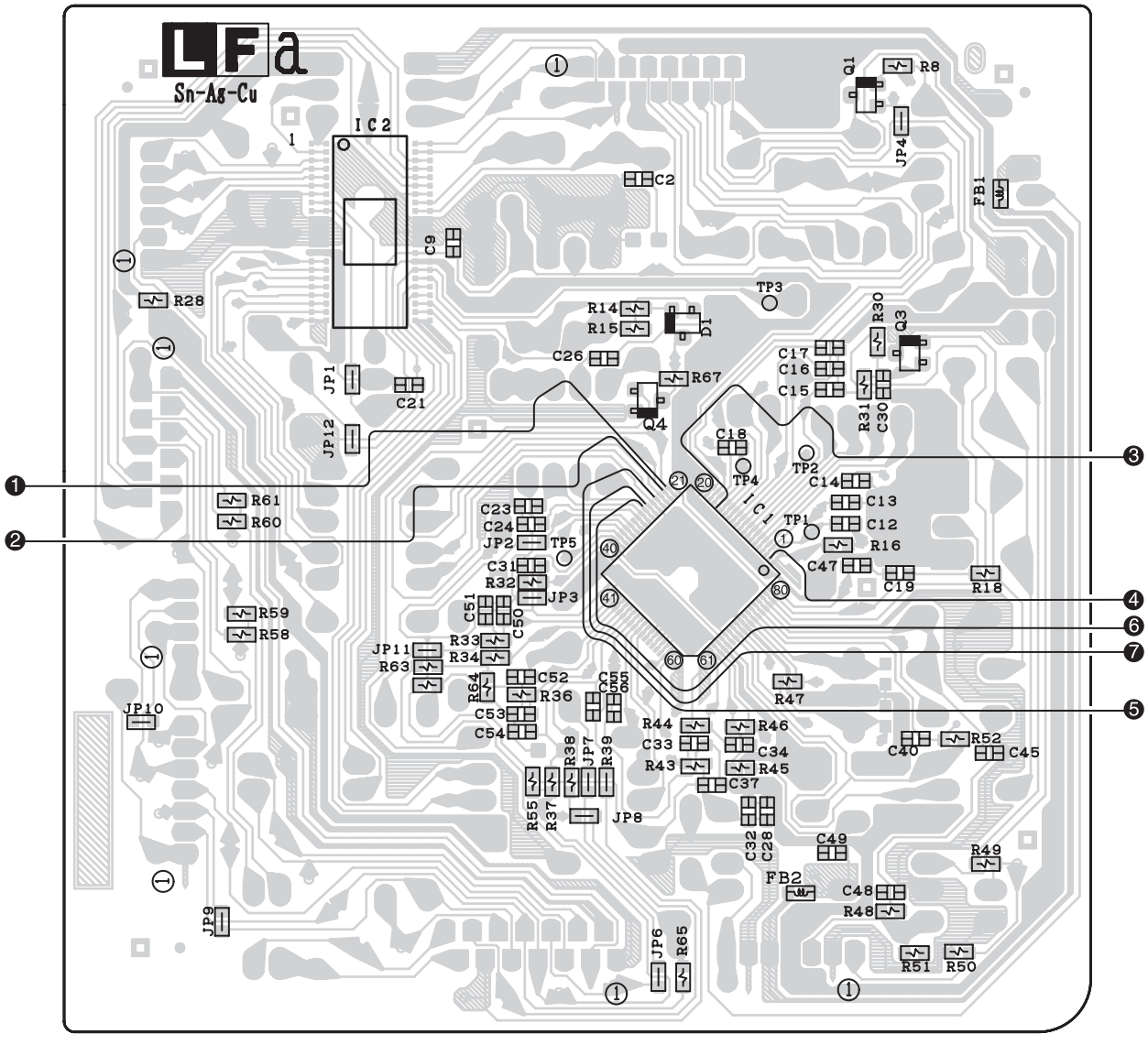
Figure 6-21: WIRING SIDE OF CD SERVO PWB (TOP VIEW) (12/15)



7	8	9	10	11	12

Figure 6-22: WIRING SIDE OF CD SERVO PWB (TOP VIEW) (13/15)

CD SERVO PWB-C



LFa ← Lead-free solder indication
Sn-Ag-Cu

Lead-free solder is used in this CD SERVO PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

• The number ❶ to ❼ are wave form number shown in page 5-1.

Figure 6-23: WIRING SIDE OF CD SERVO PWB (BOTTOM VIEW) (14/15)

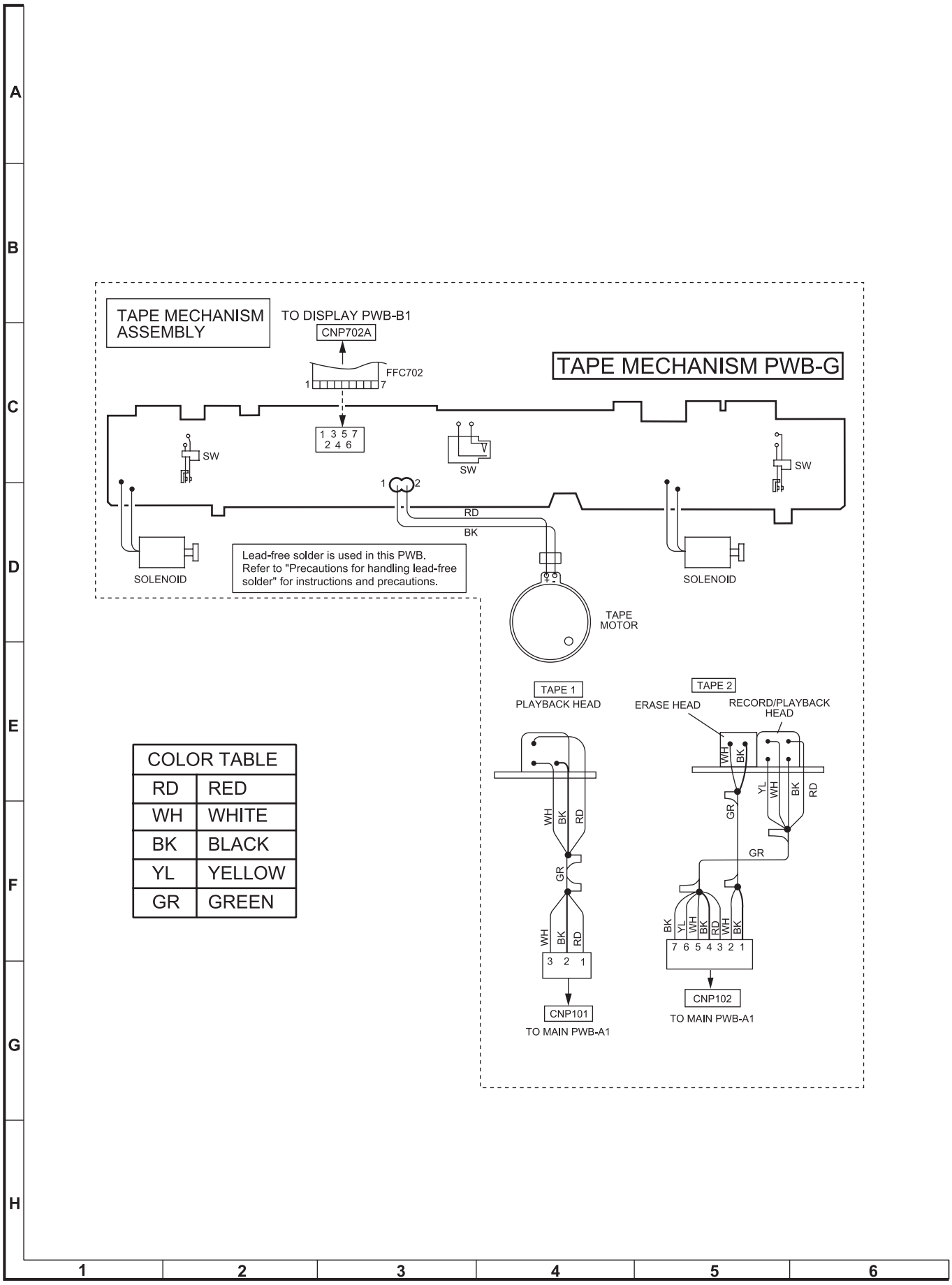


Figure 6-24: WIRING SIDE OF PWB (15/15)

CHAPTER 7. FLOWCHART

[1] Troubleshooting

1. When the CD does not function

The CD section may not operate when the objective lens of the optical pickup is dirty. Clean the objective lens, and check the playback operation. When this section does not operate even after the above step is taken, check the following items.

Remove the cabinet and follow the trouble shooting instructions.

"Track skipping and/or no TOC (Table Of Contents) may be caused by build up of dust other foreign matter on the laser pickup lens. Before attempting any adjustment make certain that the lens is clean. If not, clean it as mentioned below."

Turn the power off.

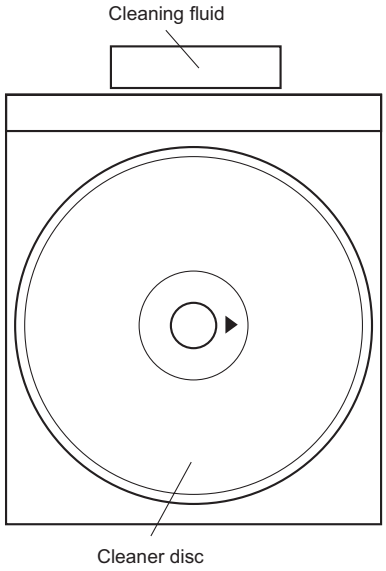
Gently clean the lens with a lens cleaning tissue and a small amount of isopropyl alcohol.

Do not touch the lens with the bare hand.

		Parts code
1.	CD optical pickup Lens cleaner disc	UDSKA0004AFZZ

HOW TO USE

1. Using the brush in the cleaner cap, apply 1 or 2 drops of the cleaning fluid to the brush on the CD cleaner disc which has the mark next to it.
2. Place the CD cleaner disc onto the CD disc tray with the brush side down, then press the play button.
3. You will hear music for about 20 seconds and the CD player will automatically stop. If it still play continuously, press the stop button.



CAUTION

- The CD lens cleaner should be effective for 30-50 operations, however if the brushes become worn out earlier then please replace the cleaner disc.
- If the CD cleaner brushes become very wet then wipe off any excess fluid with a soft cloth.
- Do not drink the cleaner fluid or allow it contact with the eyes. In the event of this happening then drink and / or rinse with clean water and seek medical advice.
- The CD cleaner disc must not be used on car CD players or on computer CD-ROM drives.
- All rights reserved. Unauthorized duplicating, broadcasting and renting this product is prohibited by law.

2. When a CD cannot be played

2.1. Pressing the CD operation key is accepted, but playback does not occur.

1) Focus-HF system check

2) Tracking system check

3) Spin system check

4) PLL system check

5) Others

(1) Focus-HF system check.

Although a CD is inserted and the cover is closed, "NO DISC" is displayed.

Press the Tray1 CD Eject Button without inserting a disc, and try starting the playback operation.

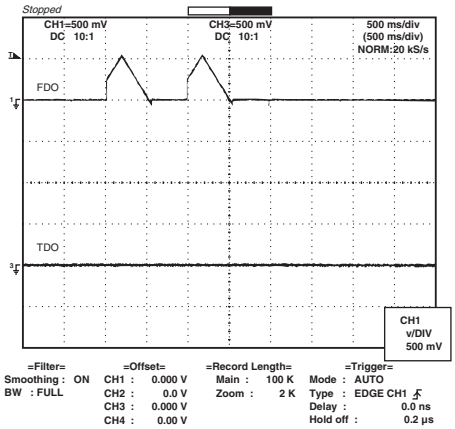


Figure 1

1. Does the pickup move to the PICKUP-IN Switch (NSW1) position ?
   - No → Sled motor (NM2).
   - Yes ↓
2. Does the focus (lens) move up and down ? (Waveform drawing Figure 1)
   - No → Check the focus peripheral circuit.
   - Yes ↓
3. Is the laser lit ?
   - No → Check the laser diode driver Q1 peripheral circuit.
   - Yes ↓
4. Is the turntable rotating ?
   - No → Spindle motor (NM1).

When a disc is loaded, start playback operation.

1. Is focus servo activated ? (Waveform drawing Figure 2)
   - No → Pins 5~9, 11, 18 and 19 on IC1
Check the laser diode driver Q1 peripheral circuit.
   - Yes ↓
2. Is the HF waveform normal ? (Waveform drawing Figure 3)
   - No → If the level is not normal.

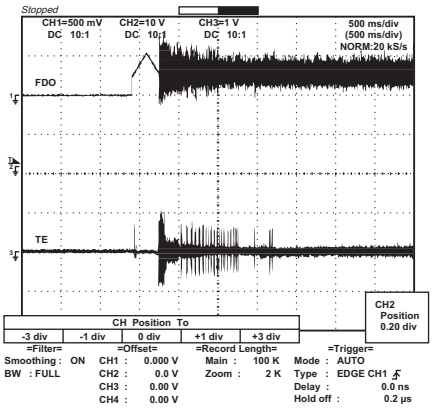


Figure 2

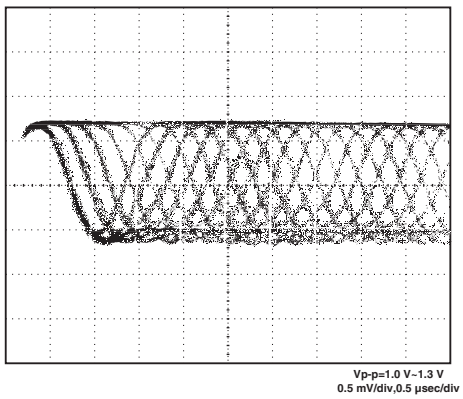


Figure 3

(2) Tracking system check.

Check the TE waveform at pin 16 on IC1.

If the waveform shown in Figure 4 appears and soon after NO DISC appears ?

Yes → The tracking servo is not activated.
Check the peripheral circuits at pins 15, 16 and 23 on IC1, and FFC1.

↓ No

"Initialization" is possible, but play is not possible ?

Yes → A normal jump operation cannot be completed or the beginning of the track cannot be found.
Check the around pin 23 on IC1.

↓ No

"Initialization" is not possible. → Data cannot be read. Check the VCO-PLL (Pin26~30 on IC1) system.

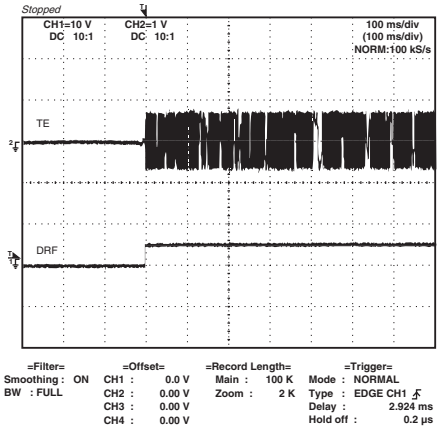

Stopped
CH1=10 V DC 10:1
CH2=1 V DC 10:1
100 ms/div
(100 ms/div)
NORM:100 kS/s
TE
DRF
=Filter= Smoothing : ON BW : FULL
=Offset= CH1 : 0.0 V CH2 : 0.00 V CH3 : 0.00 V CH4 : 0.00 V
=Record Length= Main : 100 K Zoom : 2 K
=Trigger= Mode : NORMAL Type : EDGE CH1 Delay : 2.924 ms Hold off : 0.2 µs

Figure 4

(3) Spin system check.

Press the OPEN/CLOSE switch without inserting a disc, and then try starting the play operation.

↓

1. The turntable rotates a little ?
(Waveform drawing Figure 5)

Yes → The spin driver circuit is OK.

↓ No

2. The turntable doesn't rotate. → Check around pin 25 on IC1, pins 5 and 6 on CNP2.

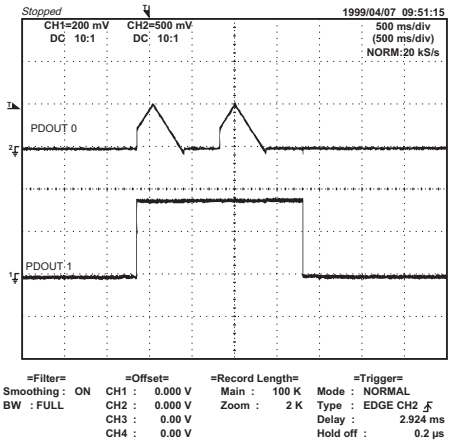

Stopped
1999/04/07 09:51:15
CH1=200 mV DC 10:1
CH2=500 mV DC 10:1
500 ms/div
(500 ms/div)
NORM:20 kS/s
PDOUT 0
PDOUT 1
=Filter= Smoothing : ON BW : FULL
=Offset= CH1 : 0.000 V CH2 : 0.000 V CH3 : 0.00 V CH4 : 0.00 V
=Record Length= Main : 100 K Zoom : 2 K
=Trigger= Mode : NORMAL Type : EDGE CH2 Delay : 2.924 ms Hold off : 0.2 µs

Figure 5

(4) PLL system check.

When a disc is loaded, start play operation.

↓

The HF waveform is normal, but the TOC data cannot be read.

↓

Check the PDOUT waveform. (Figure 6)

↓

Check around pins 26~30 on IC1.

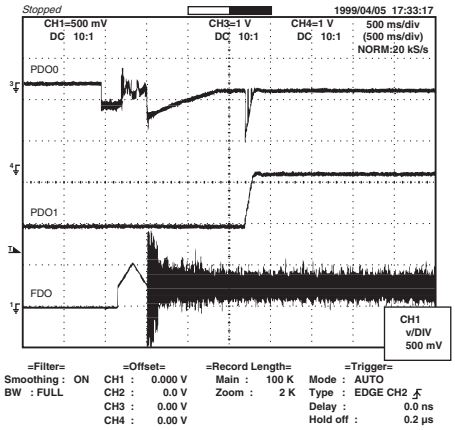


Figure 6

(5) Others.

The HF waveform is normal and the time is displayed normally, but no sound is produced. Or the sound has dropouts.

Is pin 35 (C2F) on IC1 "L" ?

No → There are too many error flags on a damaged disc which makes error correction impossible.

↓ Yes

1. When playing at normal speed.
Check the peripheral circuit at pin 69 (DOUT) on IC1 and the waveform (Figure 7).

↓

If OK, Check the unit.

Check again using a known good disc.

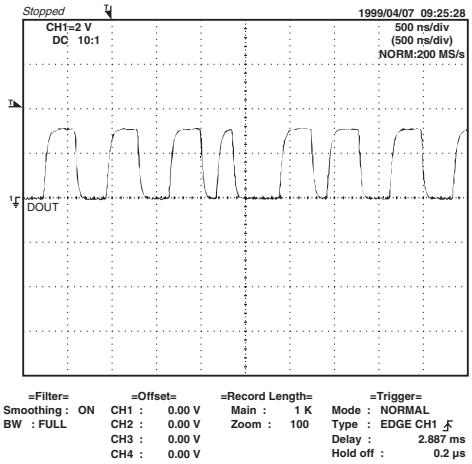


Figure 7

CHAPTER 8. OTHERS

[1] Function table of IC

IC1 VHiLC78690E-1: CD Servo (LC78690E) (1/2)

Pin No.	Terminal Name	Input/Output	Setting in Reset	Function	
1	EFMIN	Input	INPUT	RF signal input pin.	
2	RFOUT	Output	UNSTABLE	RF signal output pin.	
3	LPF	Output	UNSTABLE	RF signal DC level detection. LPF capacitor connection pin.	
4	PHLPF	Output	UNSTABLE	LPF capacitor pin for detection problem.	
5	AIN	Input	INPUT	A signal input pin.	
6	CIN	Input	INPUT	C signal input pin.	
7	BIN	Input	INPUT	B signal input pin.	
8	DIN	Input	INPUT	D signal input pin.	
9	FEC	Output	UNSTABLE	FE signal LPF capacitor connection pin.	
10*	RFMON	Output	UNSTABLE	Built in analog signal for monitoring LSI pin.	
11	VREF	Output	AVDD/2	VREF voltage output pin.	
12	JITTC	Output	UNSTABLE	Jitter detection capacitor connection pin.	
13	EIN	Input	INPUT	E signal input pin.	
14	FIN	Input	INPUT	F signal input pin.	
15	TEC	Output	UNSTABLE	TE signal LPF capacitor connection pin.	
16	TE	Output	UNSTABLE	TE signal output pin.	
17	TEIN	Input	INPUT	TES signal generation TE signal input pin.	
18	LDD	Output	UNSTABLE	Laser power control signal output pin.	
19	LDS	Input	INPUT	Laser power control signal input pin.	
20	AVSS	—	—	Analog GND pin. This pin must always be connected to 0V.	
21	AVDD	—	—	Analog power supply pin.	
22	FDO	Output	AVDD/2	Focus control output pin. D/A converter output.	
23	TDO	Output	AVDD/2	Tracking control output pin. D/A converter output.	
24	SLDO	Output	AVDD/2	SLED control output pin. D/A converter output.	
25	SPDO	Output	AVDD/2	SPINDLE control output pin. D/A converter output.	
26	VVSS1	—	—	For use by the EFM PLL Circuit	Built-in VCO GND pin. This pin must always be connected to 0V.
27	PDOUT1	Output	UNSTABLE		Phase comparison output pin 1 to control built in VCO.
28	PDOUT0	Output	UNSTABLE		Phase comparison output pin 0 to control built in VCO.
29	PCKIST	Input	INPUT		Resistor connection pin to set current for PDOUT 0 and 1 output.
30	VVDD1	—	—		Built_in VCO power supply pin 1.
31*	DMUTEB	Output	L	DMUTEB output pin.	
32	PUIN	Input/Output	INPUT	PUIN input pin. (built-in pull-up resistor)	
33*	DEFECT	Output	L	DEFECT signal output pin.	
34*	FSEQ	Output	L	Detected sync signal output. This signal is high when the sync signal detected from the EFM signal and the internally generated sync signal agree.	
35*	C2F	Output	L	C2 error flag monitor output pin.	
36	DVDD	—	—	Digital power supply pin.	
37	DVSS	—	—	Digital GND pin. This pin must always be connected to 0V.	
38	DVDD1.8	Output	H	Supply voltage connect to capacitor for digital circuit.	
39	VDD3	—	—	Built-in VCO power supply pin 3.	
40	VVSS3	—	—	Built-in VCO GND pin 3. This pin must always be connected to 0V.	
41	DVDD	—	—	Digital power supply pin.	
42	DVSS	—	—	Digital GND pin. This pin must always be connected to 0V.	
43	CE	Input	INPUT	Micro-Com-puter Inter-face	Chip enable signal input pin.
44	CL	Input	INPUT		Data transfer clock input pin.
45	DI	Input	INPUT		Data input pin.
46	DO	Output	H		Data output pin. (TRI-State Output)
47	RESB	Input	—	Reset input pin for LSI. This pin must set to low briefly after power is applied.	
48	INTB0	Output	H	Interrupt signal output pin 0. (SERVO Section)	
49	INTB1	Output	H	Interrupt signal output pin 1. (DECODER Section)	
50	ICONT2	Input/Output	INPUT	General Purpose I/O pin 2	Controlled by command from the microprocessor. Any of these that are unused must be either set up as input pin ports and connected to 0V, or set up as output pin ports and left open.

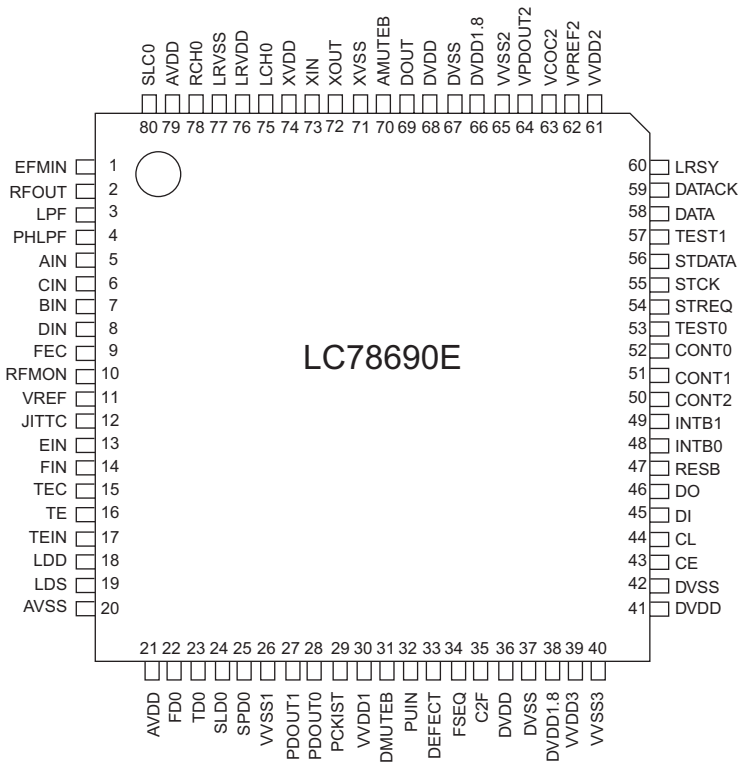
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC1 VHiLC78690E-1: CD Servo (LC78690E) (2/2)

Pin No.	Terminal Name	Input/Output	Setting in Reset	Function	
51	CONT1	Input/Output	INPUT	General Purpose I/O pin 1	Controlled by command from the microprocessor. Any of these that are unused must be either set up as input pin ports and connected to 0V, or set up as output pin ports and left open.
52	CONT0	Input/Output	INPUT	General Purpose I/O pin 0	
53	TEST0	Input	L	Test input pin 1. This pin must always be connected to 0V.	
54	STREQ	Input/Output	INPUT	Stream data request output pin.	
55	STCK	Input/Output	INPUT	Stream data bit clock usage input pin.	
56	STDATA	Input/Output	INPUT	Stream data input pin.	
57	TEST1	Input	L	Test input pin 0. This pin must always be connected to 0V.	
58*	DATA	Output	L	Left/Right clock output pin.	
59*	DATACK	Output	L	Bit clock output pin.	
60*	LRSY	Output	L	Left/Right channel data output pin.	
61	VVDD2	—	—	For use by the EFM PLL Circuit	Built-in VCO power supply pin 2.
62	VPREF2	Input	INPUT		Built-in VCO control oscillator range setting input pin.
63	VCOC2	Input	INPUT		Built-in VCO control voltage setting input pin.
64	VPDOUT2	Output	UNSTABLE		Built-in VCO control output pin 2.
65	VVSS2	—	—		Built-in VCO GND pin. This pin must always be connected to 0V.
66	DVDD1.8	Output	H	Supply voltage connect to condenser for digital circuit.	
67	DVSS	—	—	Digital GND pin. This pin must always be connected to 0V.	
68	DVDD	—	—	Digital power supply pin.	
69*	DOUT	Output	Input	Digital output pin. EIAJ format.	
70*	AMUTEB	Output	L	GAMUTEB output pin.	
71	XVSS	—	—	Digital GND pin. This pin must always be connected to 0V.	
72	XOUT	Output	OSCILLATING	Crystal oscillator	Connections for a 16.9344 MHZ oscillator element.
73	XIN	Input	OSCILLATING		
74	XVDD	—	—	Digital power supply pin.	
75	LCHO	Output	LRVDD/2	D/A converter	Left channel output supply pin.
76	LRVDD	—	—		LR channel power supply pin.
77	LRVSS	—	—		LR channel GND pin. This pin must always be connected to 0V.
78	RCHO	Output	LRVDD/2		Right channel input supply pin.
79	AVDD	—	—	Analog power supply pin.	
80	SLCO	—	—	Slice level control output pin.	

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC1 VHiLC78690E-1: CD Servo (LC78690E)



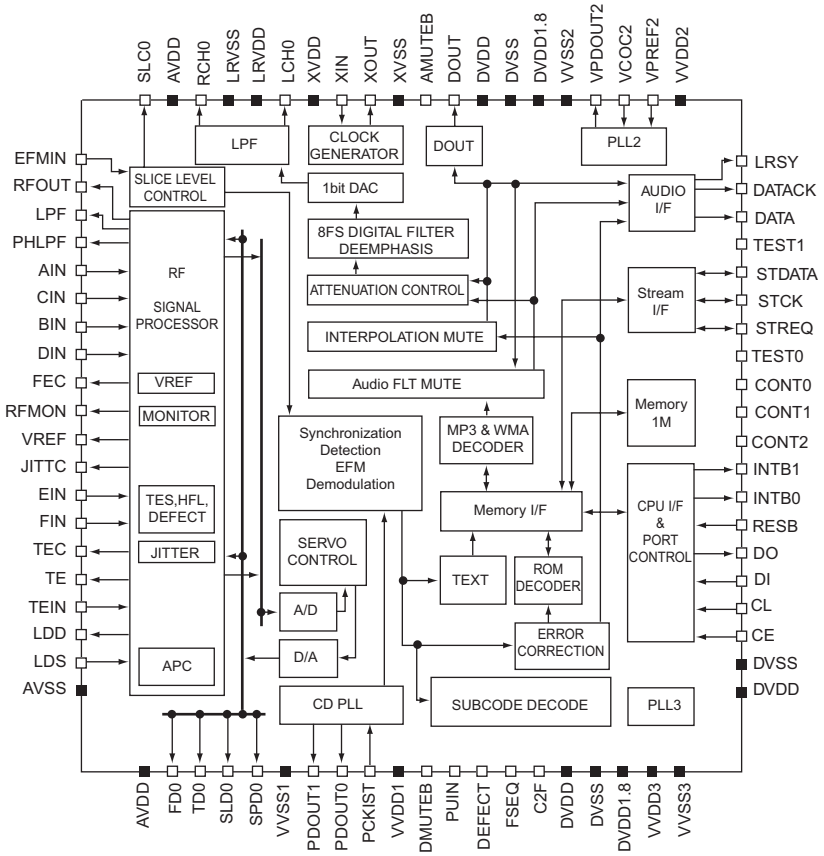


Figure 8-3 BLOCK DIAGRAM OF IC

IC2 VHILA6261//-1: Focus/Tracking/Spin/Sled Driver (LA6261)

Pin No.	Terminal Name	Function
1	VO3+	BTL Output pin (+) for channel 3.
2	VO3-	BTL Output pin (-) for channel 3.
3	VO2+	BTL Output pin (+) for channel 2.
4	VO2-	BTL Output pin (-) for channel 2.
5	VO1+	BTL Output pin (+) for channel 1.
6	VO1-	BTL Output pin (-) for channel 1.
7	PGND1	Power GND for channels 1,2,3 and 4 (BTL).
8	REGIN	Regulator pin (External PNP base).
9	PVCC1	Power for channels 1,2,3 and 4 (BTL). (SVCC short-circuited)
10	REGOUT	Regulator pin (External PNP collector).
11	VIN1	Input pin for channel 1.
12*	VIN1G	Input pin for channel 1 (for gain control).
13	VIN2	Input pin for channel 2.
14*	VIN2G	Input pin for channel 2 (for gain control).
15	VIN3	Input pin for channel 3.
16*	VIN3G	Input pin for channel 3 (for gain control).
17	VIN4	Input pin for channel 4.
18	VIN4G	Input pin for channel 4 (for gain control).
19	FWD5	CH5 Output change pin (FWD). Logic input for bridge.
20	REV5	CH5 Output change pin (REV). Logic input for bridge.
21	VCONT5	Input pin for CH5 output voltage control.
22	FWD6	CH6 Output change pin (FWD). Logic input for bridge.
23	REV6	CH6 Output change pin (REV). Logic input for bridge.
24	VCONT6	Input pin for CH5 output voltage control.
25	VREFIN	Reference voltage input pin.
26	SGND	Signal system GND.
27	SVCC	Signal system power (PVCC1 short - circuited).
28	PVCC2	Power for channel 5 and 6 (H bridge).
29	MUTE	Input pin for BTL mute.
30	PGND2	Power GND for channels 5 and 6 (H bridge).
31	VO6+	H bridge Output pin (+) for channel 6.
32	VO6-	H bridge Output pin (-) for channel 6.
33	VO5+	H bridge Output pin (+) for channel 5.
34	VO5-	H bridge Output pin (-) for channel 5.
35	VO4+	BTL Output pin (+) for channel 4.
36	VO4-	BTL Output pin (-) for channel 4.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

* Set power system GND to the minimum potential together with SGND.

* Short-circuit three pins of power system SVSS and PVCC1 externally before use.

IC2 VHILA6261//-1: Focus/Tracking/Spin/Sled Driver (LA6261)

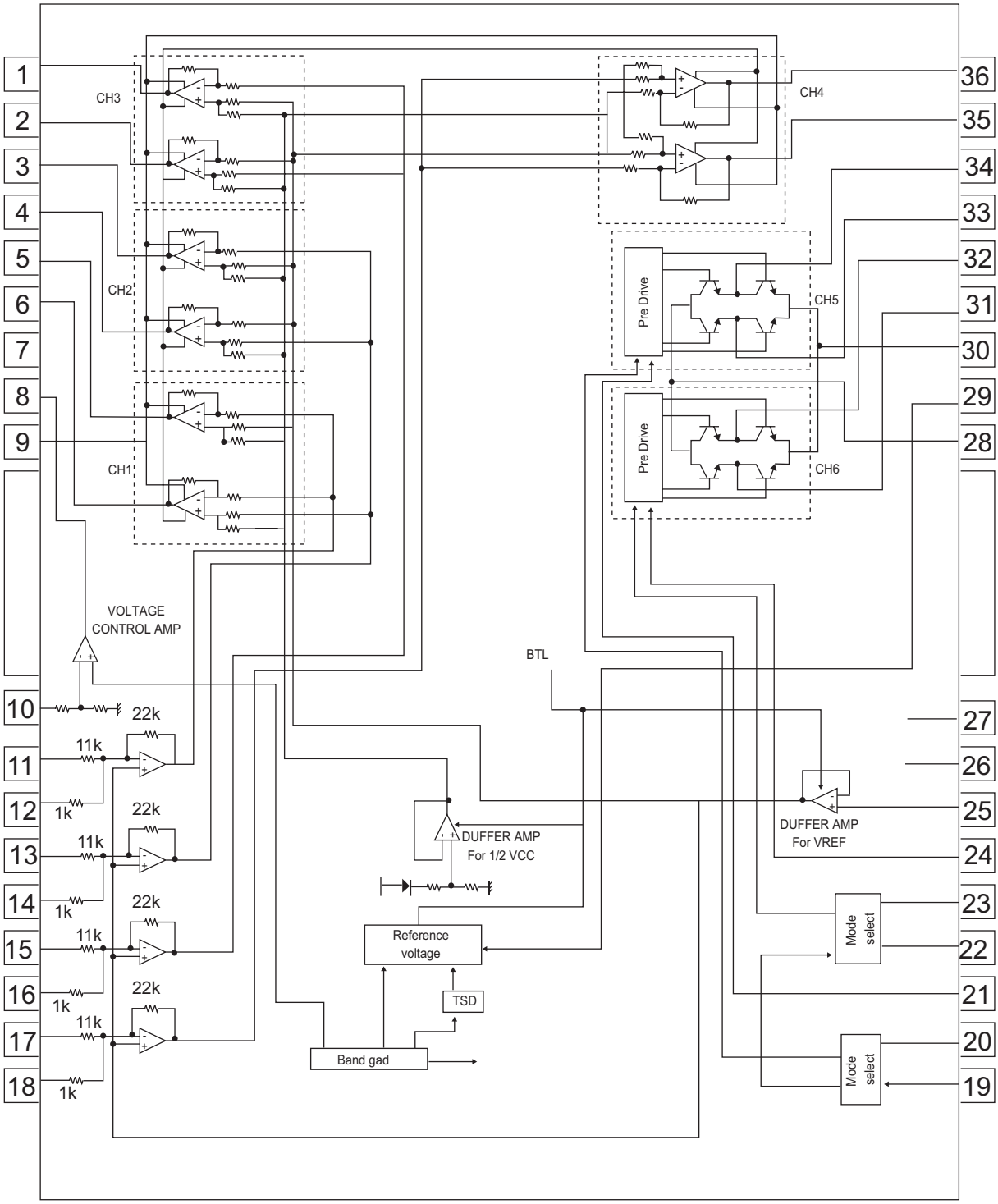


Figure 8-5 BLOCK DIAGRAM OF IC

IC601 VHiLC75341/-1: Audio Processor (LC75341)

Pin No.	Terminal Name	Function
1	DI	Serial data and clock input pin for control.
2	CE	Chip enable pin. Data written into an internal latch in a timing of "H" to "L". Each analog switch is activated. Data transfer enabled at "H" level.
3	VSS	Ground pin.
4	LOUT	Bass band filter comprising capacitor and resistor connection pin and bass/treble output pin.
5	LBASS	Bass band filter comprising capacitor and resistor connection pin.
6	LTRE	Treble band filter comprising capacitor and resistor connection pin.
7	LIN	Volume + equalizer output pin.
8	LSEL0	Input selector output pin.
9-12	L4-1	Input signal pin.
13-16	R1-4	Input signal pin.
17	RSEL0	Input selector output pin.
18	RIN	Volume + equalizer output pin
19	RTRE	Treble band filter comprising capacitor and resistor connection pin.
20	RBASS	Bass band filter comprising capacitor and resistor connection pin.
21	ROUT	Bass band filter comprising capacitor and resistor connection pin and bass/treble output pin.
22	VREF	0.5x VDD voltage generation block for analog ground. Capacitor of several 10µF to be connected between VREF and AWSS (VSS) as a countermeasure against power ripple.
23	VDD	Supply pin.
24	CLK	Serial data and clock input pin for control.

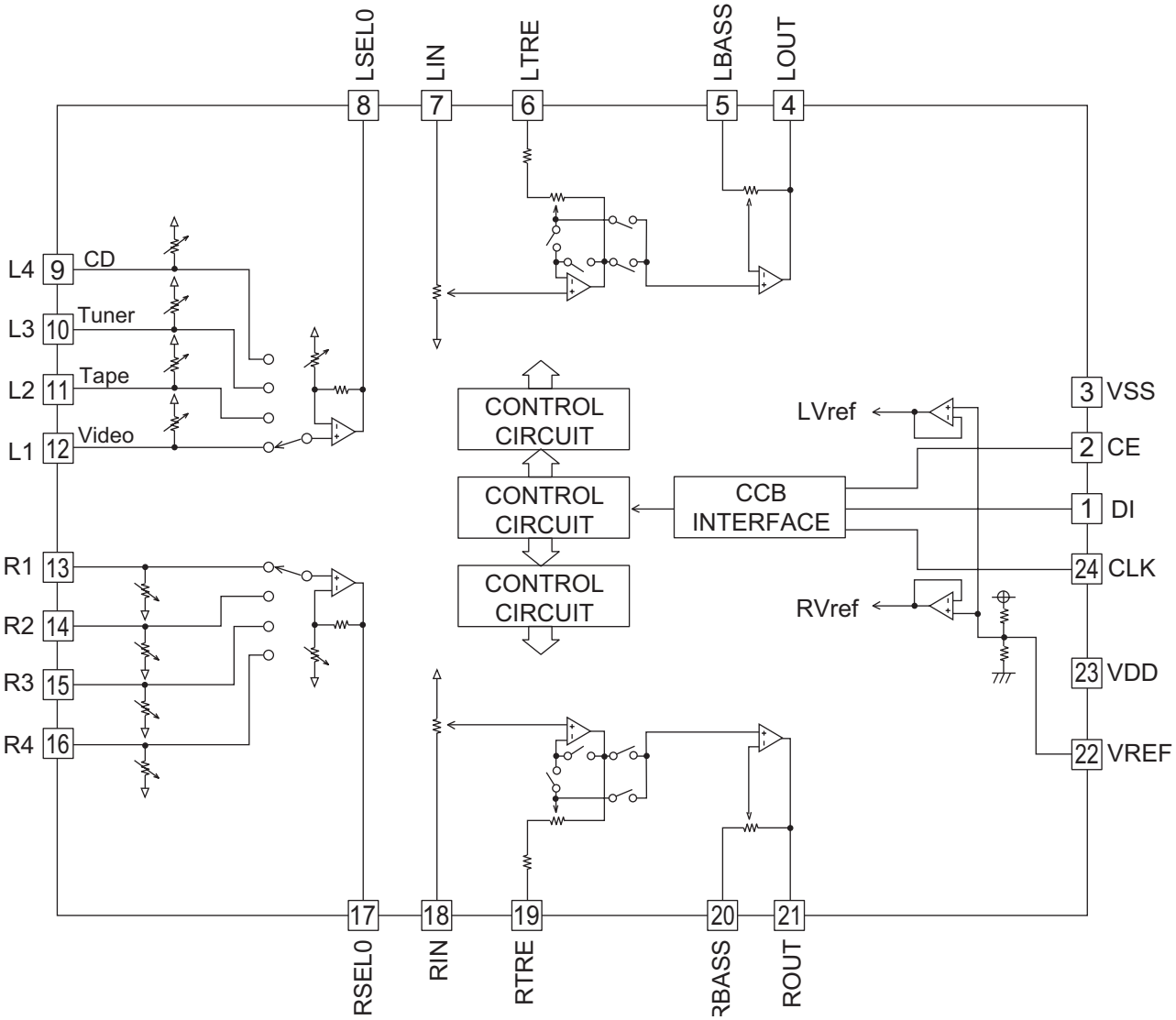


Figure 8-6 BLOCK DIAGRAM OF IC

IC851 VHIAN80T53/-1: Multi Regulator (AN80T53)

Pin No.	Terminal Name	Function
1	REG4 Output	5.1 V power supply with a minimum peak out current of 1200 mA.
2	REG3 Output	13 V power supply with a minimum peak out current of 1350 mA.
3	VCC	Connected to Power supplies.
4	GND	Connected to the IC substrate.
5	MODE 1	REG1, REG2,REG3 and REG4 outputs are turned ON when this pin is 5 V.
6	REG2 Output	10 V power supply with a minimum peak out current of 800 mA.
7	REG1 Output	8.5 V power supply with a minimum peak out current of 700 mA.

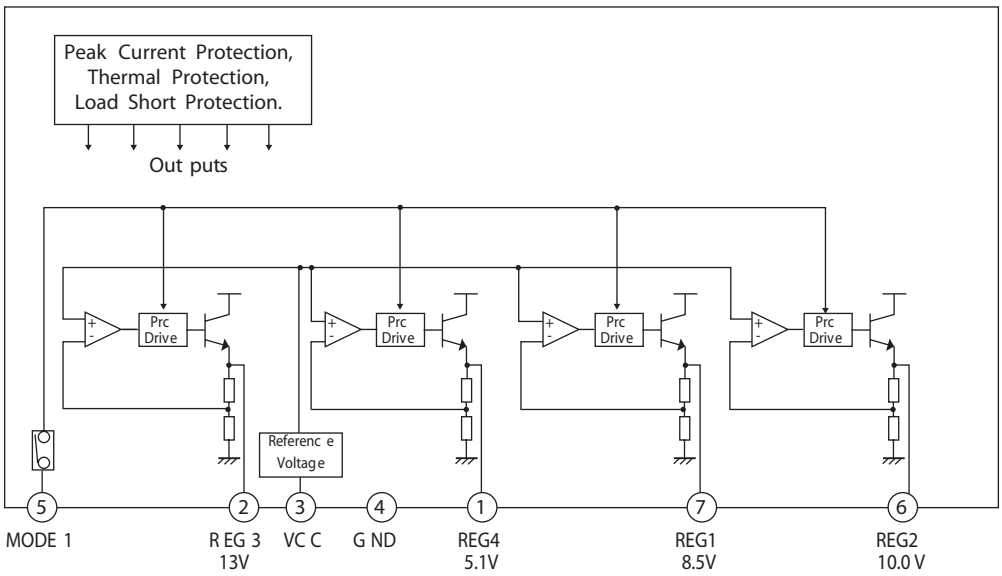
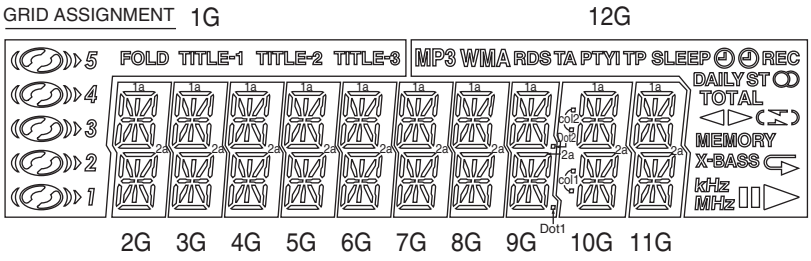


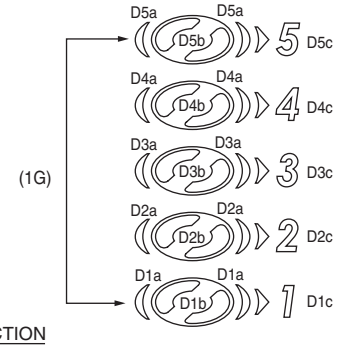
Figure 8-10 BLOCK DIAGRAM OF IC

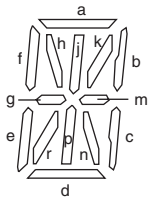
[2] FL Display

FL701 VVKNA12MM54-1

GRID ASSIGNMENT







ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
P1	FOLD	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	
P2	TITLE-1	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	
P3	TITLE-2	1k	1k	1k	1k	1k	1k	1k	1k	1k	1k	TOTAL
P4	TITLE-3	1j	1j	1j	1j	1j	1j	1j	1j	1j	1j	RDS
P5	5	1h	1h	1h	1h	1h	1h	1h	1h	1h	1h	TA
P6	D5a	1f	1f	1f	1f	1f	1f	1f	1f	1f	1f	WMA
P7	D5b	1m	1m	1m	1m	1m	1m	1m	1m	1m	1m	PTYI
P8	D5c	1d	1d	1d	1d	1d	1d	1d	1d	1d	1d	TP
P9	4	1g	1g	1g	1g	1g	1g	1g	1g	1g	1g	SLEEP
P10	D4a	1p	1p	1p	1p	1p	1p	1p	1p	1p	1p	DAILY
P11	D4b	1e	1e	1e	1e	1e	1e	1e	1e	1e	1e	(L)
P12	D4c	1n	1n	1n	1n	1n	1n	1n	1n	1n	1n	(R)
P13	3	1r	1r	1r	1r	1r	1r	1r	1r	1r	1r	REC
P14	D3a	1c	1c	1c	1c	1c	1c	1c	1c	1c	1c	ST
P15	D3b	2a	2a	2a	2a	2a	2a	2a	2a	2a	2a	◁
P16	D3c	2b	2b	2b	2b	2b	2b	2b	2b	2b	2b	▷
P17	2	2k	2k	2k	2k	2k	2k	2k	2k	2k	2k	∞
P18	D2a	2j	2j	2j	2j	2j	2j	2j	2j	2j	2j	(
P19	D2b	2h	2h	2h	2h	2h	2h	2h	2h	2h	2h	1
P20	D2c	2f	2f	2f	2f	2f	2f	2f	2f	2f	2f	)
P21	1	2m	2m	2m	2m	2m	2m	2m	2m	2m	2m	MEMORY
P22	D1a	2d	2d	2d	2d	2d	2d	2d	2d	2d	2d	X-BASS
P23	D1b	2g	2g	2g	2g	2g	2g	2g	2g	2g	2g	▷(II)
P24	D1c	2p	2p	2p	2p	2p	2p	2p	2p	2p	2p	kHz
P25		2e	2e	2e	2e	2e	2e	2e	2e	2e	2e	MHz
P26		2n	2n	2n	2n	2n	2n	2n	2n	2n	2n	II
P27		2r	2r	2r	2r	2r	2r	2r	2r	2r	2r	MP3
P28		2c	2c	2c	2c	2c	2c	2c	2c	2c	2c	X-BASS
P29									Dot1	Col1		
P30									Dot2	Col2		

OUTER DIMENSIONS

PIN CONNECTION

PIN NO.	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
CONNECTION	F2	F2	NP	NP	P30	P29	P28	P27	P26	P25	P24	P23	P22	P21	P20	P19	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9

PIN NO.	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	P8	P7	P6	P5	P4	P3	P2	P1	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	NX	NX	2G	1G	NP	F1	F1

-MEMO-

SHARP PARTS GUIDE

MINI COMPONENT SYSTEM

MODEL CD-MPX870W

CD-MPX870W Mini Component System consisting of CD-MPX870W (main unit) and CP-MPX870 (speaker system).

CONTENTS

[1] INTEGRATED CIRCUITS

[2] TRANSISTORS

[3] DIODES

[4] VIBRATORS / CRYSTALS

[5] TRANSFORMERS

[6] COILS

[7] CAPACITORS

[8] RESISTORS

[9] OTHER CIRCUITRY PARTS

[10] CD MECHANISM PARTS

[11] CHANGER MECHANISM PARTS

[12] CABINET PARTS

[13] SPEAKER BOX PARTS

[14] ACCESSORIES / PACKING PARTS

[15] P.W.B. ASSEMBLY (Not Replacement Item)

[16] OTHER SERVICE PARTS

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[1] INTEGRATED CIRCUITS					
IC1	VHILC78690E-1	BE			CD Servo,LC78690
IC2	VHILA6261//-1	AN			Focus/Tracking/Spin/Sled Driver, LA6261
IC101	VHIAN7345K/-1	AM			Playback and Record / Playback Amp.,AN7345K
IC503	VHIKIA4558F-1	AF			Power Amp,KIA4558F
IC601	VHILC75341/-1	AM			Audio Processor,LC75341
IC701	RH-IXA101AWZZ	AY			System Microcomputer,IXA101AW
IC851	VHIAN80T53/-1	AL			Multi Regulator,AN80T53
IC854	VHIKIA78L05-1	AE			Constant Voltage Regulator,KIA78L05
⚠ IC901	VHISTK41242-1	BB			Power Amp,STK412-420
[2] TRANSISTORS					
Q1	VSKTA1504Y/-1	AE			Silicon,NPN,KTA1504 Y
Q2	VSKTA1271Y/-1	AC			Silicon,PNP,KTA1271 Y
Q3	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q4	VSKRC104S//-1	AC			Digital,NPN,KRC104 S
Q101	VSKTC3200GR-1	AB			Silicon,NPN,KTC3200 GR
Q102	VSKTC3200GR-1	AB			Silicon,NPN,KTC3200 GR
Q103	VSKTC3200GR-1	AB			Silicon,NPN,KTC3200 GR
Q104	VSKTC3200GR-1	AB			Silicon,NPN,KTC3200 GR
Q105	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q106	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q107	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q108	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q109	VSKTA1504Y/-1	AE			Silicon,PNP,KTA1504 Y
Q110	VSKRC104S//-1	AC			Digital,NPN,KRC104 S
Q111	VSKTC3203Y/-1	AE			Silicon,NPN,KTC3203 Y
Q112	VSKTA1504Y/-1	AE			Silicon,PNP,KTA1504 Y
Q113	VSKRC104S//-1	AC			Digital,NPN,KRC104 S
Q114	VSKRC104S//-1	AC			Digital,NPN,KRC104 S
Q603	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q604	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q665	VSKRA107S//-1	AB			Digital,PNP,KRA107 S
Q666	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q667	VSKTA1504GR-1	AB			Silicon,NPN,KTA1504 GR
Q668	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q702	VSKRC102S//-1	AB			Digital,NPN,KRC102 S
Q703	VSKRA107S//-1	AB			Digital,PNP,KRA107 S
Q704	VSKRC104S//-1	AC			Digital,NPN,KRC104 S
Q705	VSKRA107S//-1	AB			Digital,PNP,KRA107 S
Q706	VSKRC104S//-1	AC			Digital,NPN,KRC104 S
Q707	VSKRA107S//-1	AB			Digital,PNP,KRA107 S
Q708	VSKRC104S//-1	AC			Digital,NPN,KRC104 S
Q709	VSKTA1273Y/-1	AE			Silicon,PNP,KTA1273 Y
Q710	VSKTA1273Y/-1	AE			Silicon,PNP,KTA1273 Y
Q711	VSKTA1273Y/-1	AE			Silicon,PNP,KTA1273 Y
Q712	VSKRC102S//-1	AB			Digital,NPN,KRC102 S
Q713	VSKRC104S//-1	AC			Digital,NPN,KRC104 S
Q801	VSKTA1274Y/-1	AE			Silicon,PNP,KTA1274 Y
Q885	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q886	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q901	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q902	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q903	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q904	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q905	VSKTC3199GR-1	AB			Silicon,NPN,KTC3199 GR
Q906	VSKTC3203Y/-1	AE			Silicon,NPN,KTC3203 Y
Q908	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
Q909	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
QS01	VSKTC3875GR-1	AB			Silicon,NPN,KTC3875 GR
QS03	VSKTC3205Y/-1	AD			Silicon,NPN,KTC3205 Y
QS05	VSKRC104S//-1	AC			Digital,NPN,KRC104 S
QS11	VSKTC3199GR-1	AB			Silicon,NPN,KTC3199 GR
QS15	VSKRC104S//-1	AC			Digital,NPN,KRC104 S
[3] DIODES					
D1	VHDKDS184//-1	AB			Silicon,KDS184
D601	VHDKDS160//-1	AB			Silicon,KDS160
D690	VHD1SS119//-1	AA			Silicon,D1SS119
D691	VHD1SS119//-1	AA			Silicon,D1SS119
D702	VHD1SS119//-1	AA			Silicon,D1SS119
D703	VHD1SS119//-1	AA			Silicon,D1SS119
D706	VHD1SS119//-1	AA			Silicon,D1SS119
D707	VHDKDS160//-1	AB			Silicon,KDS160
D708	VHDKDS160//-1	AB			Silicon,KDS160
D709	VHD1SS119//-1	AA			Silicon,D1SS119
D710	VHD1SS119//-1	AA			Silicon,D1SS119
D711	VHD1SS119//-1	AA			Silicon,D1SS119
D712	VHD1SS119//-1	AA			Silicon,D1SS119
D713	VHD1SS119//-1	AA			Silicon,D1SS119
D752	VHD1N4148H/-1	AA			Silicon,1N4148H (Use in LED PWB-D) Use 2 pcs
D801	VHDTS10B05G-1	AH			Silicon,TS10B05GM
D802	VHDTS10B05G-1	AH			Silicon,TS10B05GM
D803	VHDDSRL204F-1	AC			Silicon,DSRL204F
D804	VHDDSRL204F-1	AC			Silicon,DSRL204F
D805	VHDDS1N404S-1	AB			Silicon,DS1N404S
D806	VHDDS1N404S-1	AB			Silicon,DS1N404S
D856	VHD1SS119//-1	AA			Silicon,D1SS119
D860	VHD1SS119//-1	AA			Silicon,D1SS119

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] DIODES					
D861	VHD1SS119//-1	AA			Silicon,D1SS119
D862	VHD1SS119//-1	AA			Silicon,D1SS119
D885	VHD1SS119//-1	AA			Silicon,D1SS119
D905	VHD1SS119//-1	AA			Silicon,D1SS119
D906	VHD1SS119//-1	AA			Silicon,D1SS119
D907	VHD1SS119//-1	AA			Silicon,D1SS119
D909	VHDDS1N404S-1	AB			Silicon,DS1N404S
D910	VHDDS1N404S-1	AB			Silicon,DS1N404S
D911	VHD1SS119//-1	AA			Silicon,D1SS119
D912	VHD1SS119//-1	AA			Silicon,D1SS119
D913	VHD1SS119//-1	AA			Silicon,D1SS119
D914	VHD1SS119//-1	AA			Silicon,D1SS119
DS01	VHD1SS119//-1	AA			Silicon,D1SS119
DS03	VHDKDS160//-1	AB			Silicon,KDS160
DS05	VHDKDS160//-1	AB			Silicon,KDS160
DS09	VHD1SS119//-1	AA			Silicon,D1SS119
LED701	VHP503BC2E30Z	AG			LED,Blue,5mm,503BC2E30
LED702	VHPSDPB40F2AC	AK			LED,Blue,SDPB40F2AC (LED PWB-D) Use 2 pcs
LED702	VHPSLR342VCB1	AC			LED,Red,SLR342VCB (DISPLAY PWB-B1)
ZD801	VHEDZ6R2BSA-1	AB			Zener,6.2V,DZ6.2BSA
ZD802	VHEDZ7R5BSB-1	AB			Zener,7.5V,DZ7.5BSB
ZD803	VHEDZ300BSB-1	AB			Zener,30V,DZ300BSB
ZD805	VHEDZ120BSB-1	AB			Zener,12V,DZ120BSB
ZD902	VHEDZ120BSB-1	AB			Zener,12V,DZ120BSB
ZD903	VHEDZ120BSB-1	AB			Zener,12V,DZ120BSB
[4] VIBRATORS/CRYSTALS					
XL1	RCRM-0047AWZZ	AE			Ceramic
XL701	RCRSP0029AWZZ	AF			Crystal
[5] TRANSFORMERS					
⚠ PT801	RTRNPA045AWZZ	BQ			Power (Main)
[6] COILS					
FB1	RBLN-0061TAZZ	AB			Ferrite Beads BLM18AG121SN1D
FB2	RBLN-0061TAZZ	AB			Ferrite Beads BLM18AG121SN1D
L103	VP-MK331K0000	AB			330 µ H,Choke
L701	VP-DH101K0000	AB			100 µ H,Choke
L901	RCILZ0024AWZZ	AC			3 µ H,Choke
L902	RCILZ0024AWZZ	AC			3 µ H,Choke
L920	RCILZA017AWZZ	AB			0.29 µ H
L921	RCILZA017AWZZ	AB			0.29 µ H
[7] CAPACITORS					
C1	VCEAZA1AW107M	AB			100 µ F,10V,Electrolytic
C2	VCKYCY1HB102K	AA			0.001 µ F,50V
C3	VCEAZA1AW107M	AB			100 µ F,10V,Electrolytic
C4	VCKYPA1HB103K	AA			0.01 µ F,50V
C5	VCEAZA1EW476M	AB			47 µ F,25V,Electrolytic
C6	RC-EZ0004AWZZ	AD			3.3 µ F,16V,Electrolytic
C7	VCKYPA1HB102K	AA			0.001 µ F,50V
C8	VCEAZA1AW476M	AB			47 µ F,10V,Electrolytic
C9	VCKYCY1HB103K	AA			0.01 µ F,50V
C10	VCEAZA0JW108M	AC			1000 µ F,6.3V,Electrolytic
C11	VCEAZA1AW107M	AB			100 µ F,10V,Electrolytic
C12	VCKYCY1HB472K	AA			0.0047 µ F,50V
C13	VCKYCY1HB103K	AA			0.01 µ F,50V
C14	VCKYCY1EF473Z	AB			0.047 µ F,25V
C15	VCKYCY1CB563K	AB			0.056 µ F,16V
C16	VCKYCY1HB103K	AA			0.01 µ F,50V
C17	VCKYCY1CB563K	AB			0.056 µ F,16V
C18	VCKYCY1HB103K	AA			0.01 µ F,50V
C19	VCKYCY1CB104K	AD			0.1 µ F,16V
C20	VCEAZA1AW107M	AB			100 µ F,10V,Electrolytic
C21	VCKYCY1CB104K	AB			0.1 µ F,16V
C22	VCEAZA1AW477M	AC			470 µ F,10V,Electrolytic
C23	VCKYCY1CB104K	AB			0.1 µ F,16V
C24	VCKYCY1CB104K	AB			0.1 µ F,16V
C25	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C26	VCKYCY1EF473Z	AB			0.047 µ F,25V
C27	VCEAZA1AW107M	AB			100 µ F,10V,Electrolytic
C28	VCKYCY1CB104K	AA			0.1 µ F,16V
C29	VCEAZA1AW107M	AB			100 µ F,10V,Electrolytic
C30	VCKYCY1CB104K	AB			0.1 µ F,16V
C31	VCKYCY1CB104K	AB			0.1 µ F,16V
C32	VCKYCY1CB104K	AB			0.1 µ F,16V
C33	VCKYCY1CB104K	AB			0.1 µ F,16V
C34	VCKYCY1CB104K	AB			0.1 µ F,16V
C35	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C36	VCEAZA1AW107M	AB			100 µ F,10V,Electrolytic
C37	VCKYCY1CB104K	AA			0.1 µ F,16V
C40	VCKYCY1CB104K	AA			0.1 µ F,16V
C41	VCEAZA1HW106M	AB			10 µ F,50V,Electrolytic
C42	VCEAZA1HW106M	AB			10 µ F,50V,Electrolytic
C43	VCKYPA1HB152K	AA			0.0015 µ F,50V
C44	VCKYPA1HB152K	AA			0.0015 µ F,50V
C45	VCKYCY1CB104K	AB			0.1 µ F,16V
C46	VCEAZA1AW477M	AC			470 µ F,10V,Electrolytic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[7] CAPACITORS					
C47	VCKYCY1EF473Z	AB			0.047 µ F,25V
C48	VCKYCY1HB103K	AA			0.01 µ F,50V
C49	VCKYCY1EF223Z	AB			0.022 µ F,25V
C50	VCCCCY1HH101J	AA			100 p F (CH),50V
C51	VCCCCY1HH101J	AA			100 p F (CH),50V
C52	VCCCCY1HH101J	AA			100 p F (CH),50V
C53	VCCCCY1HH101J	AA			100 p F (CH),50V
C54	VCKYCY1EF223Z	AB			0.022 µ F,25V
C55	VCCCCY1HH101J	AA			100 p F (CH),50V
C56	VCCCCY1HH101J	AA			100 p F (CH),50V
C57	VCEAZA1AW107M	AB			100 µ F,10V,Electrolytic
C58	VCKYBT1HB103K	AB			0.01 µ F,50V
C101	VCKYCY1HB561K	AA			560 p F,50V
C102	VCKYCY1HB561K	AA			560 p F,50V
C103	VCKYBT1HB181K	AA			180 p F,50V
C104	VCCCCY1HH181J	AA			180 p F (CH),50V
C105	VCKYCY1HB561K	AA			560 p F,50V
C106	VCKYCY1HB561K	AA			560 p F,50V
C107	VCKYCY1HB331K	AA			330 p F,50V
C108	VCKYCY1HB331K	AA			330 p F,50V
C109	VCKYCY1HB331K	AA			330 p F,50V
C110	VCKYCY1HB331K	AA			330 p F,50V
C111	VCEAZA1EW476M	AB			47 µ F,25V,Electrolytic
C112	VCEAZA1EW476M	AB			47 µ F,25V,Electrolytic
C113	VCQYKA1HM393K	AB			0.039 µ F,50V,Mylar
C114	VCQYKA1HM393K	AB			0.039 µ F,50V,Mylar
C115	VCKYCY1HB561K	AA			560 p F,50V
C116	VCKYCY1HB561K	AA			560 p F,50V
C117	VCEAZA1EW476M	AB			47 µ F,25V,Electrolytic
C118	VCEAZA1EW476M	AB			47 µ F,25V,Electrolytic
C119	VCKYCY1HB222K	AA			0.0022 µ F,50V
C120	VCKYCY1HB222K	AA			0.0022 µ F,50V
C121	VCKYCY1EF223Z	AB			0.022 µ F,25V
C123	VCKYCY1HB271K	AA			270 p F,50V
C124	VCKYCY1HB271K	AA			270 p F,50V
C125	VCEAZA1EW226M	AB			22 µ F,25V,Electrolytic
C126	VCEAZA1EW226M	AB			22 µ F,25V,Electrolytic
C127	VCQYKA1HM223K	AB			0.022 µ F,50V,Mylar
C128	VCQYKA1HM223K	AB			0.022 µ F,50V,Mylar
C129	VCKYCY1HB332K	AA			0.0033 µ F,50V
C130	VCKYCY1HB332K	AA			0.0033 µ F,50V
C131	VCEAZA1EW476M	AB			47 µ F,25V,Electrolytic
C132	VCEAZA1EW476M	AB			47 µ F,25V,Electrolytic
C133	VCEAZA1EW226M	AB			22 µ F,25V,Electrolytic
C134	VCEAZA1AW227M	AC			220 µ F,10V,Electrolytic
C135	VCKYCY1EF223Z	AB			0.022 µ F,25V
C137	VCQYKA1HM473K	AB			0.047 µ F,50V,Mylar
C138	VCQPKA2AA822J	AA			0.0082 µ F,100V
C139	VCQYKA1HM393K	AB			0.039 µ F,50V,Thin Film
C140	VCEAZA1EW476M	AB			47 µ F,25V,Electrolytic
C141	VCEAZA1CW107M	AC			100 µ F,16V,Electrolytic
C143	VCEAZA1HW335M	AB			3.3 µ F,50V,Electrolytic
C150	VCEAZA1EW476M	AB			47 µ F,25V,Electrolytic
C601	VCEAZA1CW227M	AC			220 µ F,16V,Electrolytic
C602	VCKYPA1HF223Z	AB			0.022 µ F,50V
C603	VCEAZA1AW227M	AC			220 µ F,10V,Electrolytic
C604	VCKYCY1HB681K	AA			680 p F,50V
C605	VCEAZA1HW475M	AB			4.7 µ F,50V,Electrolytic
C606	VCFYFA1HA823J	AB			0.082 µ F,50V,Thin Film
C607	VCFYFA1HA823J	AB			0.082 µ F,50V,Thin Film
C608	VCFYFA1HA124J	AL			0.12 µ F,50V,Thin Film
C609	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C610	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C611	VCKYCY1HB272K	AA			0.0027 µ F,50V
C612	VCKYCY1HB272K	AA			0.0027 µ F,50V
C613	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C614	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C615	VCFYFA1HA124J	AL			0.12 µ F,50V,Thin Film
C616	VCEAZA1HW475M	AB			4.7 µ F,50V,Electrolytic
C617	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C618	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C619	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C620	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C621	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C622	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C623	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C624	VCEAZA1HW105M	AB			1 µ F,50V,Electrolytic
C625	VCKYCY1HB222K	AA			0.0022 µ F,50V
C626	VCKYCY1HB222K	AA			0.0022 µ F,50V
C640	VCEAZA1HW226M	AB			22 µ F,50V,Electrolytic
C641	VCEAZA1AW107M	AB			100 µ F,10V,Electrolytic
C651	VCKYCY1HB221K	AA			220 p F,50V
C652	VCKYCY1HB221K	AA			220 p F,50V
C653	VCKYCY1HB221K	AA			220 p F,50V
C661	VCKYCY1HB681K	AA			680 p F,50V
C690	VCKYPA1HB391K	AA			390 p F,50V
C691	VCKYPA1HB391K	AA			390 p F,50V
C693	VCKYCY1EF104Z	AA			0.1 µ F,25V
C694	VCKYPA1HB103K	AB			0.01 µ F,50V

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[7] CAPACITORS					
C701	VCEAZA1HW105M	AB			1 μ F,50V,Electrolytic
C702	VCEAZA1AW227M	AC			220 μ F,10V,Electrolytic
C703	VCKYCY1EF223Z	AB			0.022 μ F,25V
C704	VCKYCY1EF223Z	AB			0.022 μ F,25V
C705	VCKYCY1EF473Z	AB			0.047 μ F,25V
C706	VCKYCY1EF473Z	AB			0.047 μ F,25V
C707	VCCCCY1HH180J	AA			18 p F (CH),50V
C708	VCCCCY1HH180J	AA			18 p F (CH),50V
C709	VCKYCY1EF223Z	AB			0.022 μ F,25V
C710	VCEAZA1EW476M	AB			47 μ F,25V,Electrolytic
C712	VCEAZA1HW335M	AB			3.3 μ F,50V,Electrolytic
C713	VCKYCY1HB103K	AA			0.01 μ F,50V
C714	VCKYCY1EF473Z	AB			0.047 μ F,25V
C715	VCKYCY1HB103K	AA			0.01 μ F,50V
C716	VCKYCY1EF223Z	AB			0.022 μ F,25V
C717	VCKYCY1HB473K	AA			0.047 μ F,50V
C718	VCKYCY1HB473K	AA			0.047 μ F,50V
C721	VCEAZA1HW105M	AB			1 μ F,50V,Electrolytic
C801	VCEAZA1VW107M	AC			100 μ F,35V,Electrolytic
C802	VCEAZA1HW476M	AB			47 μ F,50V,Electrolytic
C803	VCEAZA1HW476M	AB			47 μ F,50V,Electrolytic
C804	VCEAZA1JW227M	AB			220 μ F,63V,Electrolytic
C805	VCEAZA2AW226M	AC			22 μ F,100V,Electrolytic
C806	VCFYFA1HA104J	AB			0.1 μ F,50V,Thin Film
C807	VCFYFA1HA104J	AB			0.1 μ F,50V,Thin Film
C808	VCQYKA1HM104K	AB			0.1 μ F,50V,Mylar
C809	VCQYKA1HM104K	AB			0.1 μ F,50V,Mylar
C810	VCFYDA2AA224J	AD			0.22 μ F,50V,Thin Film
C811	VCFYDA2AA224J	AD			0.22 μ F,50V,Thin Film
C850	VCEAZW1EW478M	AK			4700 μ F,25V,Electrolytic
C854	VCEAZA1EW227M	AC			220 μ F,25V,Electrolytic
C855	VCEAZA1HW476M	AB			47 μ F,50V,Electrolytic
C856	VCFYFA1HA104J	AC			0.1 μ F,50V,Thin Film
C859	VCEAZA1HW226M	AB			22 μ F,50V,Electrolytic
C861	VCKYPA1HF223Z	AB			0.022 μ F,50V
C864	VCEAZA1EW226M	AB			22 μ F,25V,Electrolytic
C865	VCEAZA1EW226M	AB			22 μ F,25V,Electrolytic
C869	VCKYPA1HF223Z	AB			0.022 μ F,50V
C885	VCKYCY1HB104K	AD			0.1 μ F,50V
C901	VCEAZA1HW105M	AB			1 μ F,50V,Electrolytic
C902	VCEAZA1HW105M	AB			1 μ F,50V,Electrolytic
C903	VCKYCY1HB102K	AA			0.001 μ F,50V
C904	VCKYCY1HB102K	AA			0.001 μ F,50V
C905	VCEAZA1HW476M	AB			47 μ F,50V,Electrolytic
C906	VCEAZA1HW476M	AB			47 μ F,50V,Electrolytic
C907	VCCCCY1HH101J	AA			100 p F (CH),50V
C908	VCCCCY1HH3R0C	AA			3 p F (CH),50V
C909	VCQYKA1HM104K	AB			0.1 μ F,50V,Mylar
C910	VCCCCY1HH3R0C	AA			3 p F (CH),50V
C911	VCEAZA2AW107M	AD			100 μ F,100V,Electrolytic
C912	VCEAZA2AW107M	AD			100 μ F,100V,Electrolytic
C913	VCCCCY1HH101J	AA			100 p F (CH),50V
C914	VCEAZA2AW107M	AD			100 μ F,100V,Electrolytic
C915	VCEAZA2AW107M	AD			100 μ F,100V,Electrolytic
C916	VCEAZA1HW107M	AC			100 μ F,50V,Electrolytic
C917	VCKYCY1HB103K	AA			0.01 μ F,50V
C918	VCEAZA1HW107M	AC			100 μ F,50V,Electrolytic
C919	VCKYCY1HB103K	AA			0.01 μ F,50V
C920	RC-EZ0029AWZZ	AN			3300 μ F,71V,Electrolytic
C921	RC-EZ3016AWZZ	AG			4700 μ F,35V,Electrolytic
C922	RC-EZ3016AWZZ	AG			4700 μ F,35V,Electrolytic
C923	RC-EZ0029AWZZ	AN			3300 μ F,71V,Electrolytic
C925	VCEAZA1HW476M	AB			47 μ F,50V,Electrolytic
C926	VCFYFA1HA224J	AC			0.22 μ F,50V
C927	VCFYFA1HA224J	AC			0.22 μ F,50V
C928	VCFYFA1HA224J	AC			0.22 μ F,50V
C929	VCFYFA1HA224J	AC			0.22 μ F,50V
C939	VCEAZA1HW106M	AB			10 μ F,50V,Electrolytic
C946	VCEAZA1HW104M	AB			0.1 μ F,50V,Electrolytic
CS01	VCKYCY1HB102K	AA			0.001 μ F,50V
CS03	VCCCCY1HH101J	AA			100 p F (CH),50V
CS07	VCEAZA1HW226M	AB			22 μ F,50V,Electrolytic
CS09	VCEAZA1HW226M	AB			22 μ F,50V,Electrolytic
CS13	VCEAZA1HW106M	AB			10 μ F,50V,Electrolytic
CS15	VCEAZA1EW476M	AB			47 μ F,25V,Electrolytic
CS18	VCEAZA1CW106M	AC			10 μ F,16V,Electrolytic
CS19	VCKYCY1HB104K	AD			0.1 μ F,50V
[8] RESISTORS					
JP1	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP2	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP3	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP4	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green (MAIN PWB-A1)
JP4	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green (CD PWB)
JP6	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP7	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP8	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP9	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green (MAIN PWB-A1)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] RESISTORS					
JP9	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green (CD PWB)
JP10	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green (MAIN PWB-A1)
JP10	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green (CD PWB)
JP11	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green (MAIN PWB-A1)
JP11	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green (CD PWB)
JP12	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP601	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP602	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP608	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP652	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP660	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP665	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP701~703	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP704	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP705	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP706	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP710	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP714~15	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP717~18	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP721	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP723~24	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP731~32	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP802	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP803	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP804	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP807	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP809	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP810	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP812	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP817	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP819	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP821	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP822	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
JP823	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
R7	VRD-ST2CD470J	AA			47 ohms,1/6W
R8	VRS-CY1JB100J	AA			10 ohms,1/16W
R9	VRD-ST2CD102J	AA			1 kohms,1/6W
R10	VRD-ST2CD562J	AA			5.6 kohms,1/6W
R11	VRD-ST2CD682J	AA			6.8 kohms,1/6W
R12	VRD-ST2CD103J	AA			10 kohms,1/6W
R13	VRD-ST2CD103J	AA			10 kohms,1/6W
R14	VRS-CY1JB103J	AA			10 kohms,1/16W
R15	VRS-CY1JB103J	AA			10 kohms,1/16W
R16	VRS-CY1JB331J	AA			330 ohms,1/16W
R17	VRD-ST2CD330J	AA			33 ohms,1/6W
R18	VRS-CY1JB1R0J	AA			1 ohms,1/16W
R19	VRD-ST2CD682J	AA			6.8 kohms,1/6W
R20	VRD-ST2CD882J	AA			8.8 kohms,1/6W
R21	VRD-ST2CD682J	AA			6.8 kohms,1/6W
R22	VRD-ST2CD682J	AA			6.8 kohms,1/6W
R23	VRD-ST2CD681J	AA			680 ohms,1/6W
R24	VRD-ST2CD681J	AA			680 ohms,1/6W
R25	VRD-ST2CD683J	AA			68 kohms,1/6W
R26	VRD-ST2CD102J	AA			1 kohms,1/6W
R27	VRD-ST2CD820J	AA			82 ohms,1/6W
R28	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R29	VRD-ST2CD1R0J	AA			1 ohms,1/6W
R30	VRS-CY1JB271J	AA			270 ohms,1/16W
R31	VRS-CY1JB681J	AA			680 ohms,1/16W
R32	VRS-CY1JB820J	AA			82 ohms,1/16W
R33	VRS-CY1JB102J	AA			1 kohms,1/16W
R34	VRS-CY1JB102J	AA			1 kohms,1/16W
R35	VRD-ST2CD102J	AA			1 kohms,1/6W
R36	VRS-CY1JB102J	AA			1 kohms,1/16W
R37	VRS-CY1JB102J	AA			1 kohms,1/16W
R38	VRS-CY1JB102J	AA			1 kohms,1/16W
R39	VRS-CY1JB102J	AA			1 kohms,1/16W
R40	VRD-ST2CD102J	AA			1 kohms,1/6W
R41	VRD-ST2CD102J	AA			1 kohms,1/6W
R42	VRD-ST2CD102J	AA			1 kohms,1/6W
R43	VRS-CY1JB820J	AA			82 ohms,1/16W
R44	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R45	VRS-CY1JB151J	AA			150 ohms,1/16W
R46	VRS-CY1JB223J	AA			22 kohms,1/16W
R47	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
R48	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R49	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R50	VRS-CY1JB103J	AA			10 kohms,1/16W
R51	VRS-CY1JB103J	AA			10 kohms,1/16W
R51	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green (MAIN PWB-A1)
R52	VRS-CY1JB820J	AA			82 ohms,1/16W
R52	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green (MAIN PWB-A1)
R53	VRD-ST2EE1R0J	AA			1 ohms,1/4W
R54	VRD-ST2EE1R0J	AA			1 ohms,1/4W
R55	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R57	VRD-ST2CD333J	AA			33 kohms,1/6W
R58	VRS-CY1JB152J	AA			1.5 kohms,1/16W
R59	VRS-CY1JB272J	AA			2.7 kohms,1/16W
R60	VRS-CY1JB152J	AA			1.5 kohms,1/16W

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] RESISTORS					
R61	VRS-CY1JB272J	AA			2.7 kohms,1/16W
R62	VRD-ST2CD271J	AA			270 ohms,1/6W
R63	VRS-CY1JB182J	AA			1.8 kohms,1/16W
R64	VRS-CY1JB392J	AA			3.9 kohms,1/16W
R65	VRS-CY1JB182J	AA			1.8 kohms,1/16W
R66	VRD-ST2CD392J	AA			3.9 kohms,1/6W
R67	VRS-CY1JB225J	AA			2.2 Mohms,1/16W
R101	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R102	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R103	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R104	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R105	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R106	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R107	VRS-CY1JB473J	AA			47 kohms,1/16W
R108	VRS-CY1JB473J	AA			47 kohms,1/16W
R109	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R110	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R111	VRD-ST2CD153J	AA			15 kohms,1/6W
R112	VRS-CY1JB153J	AA			15 kohms,1/16W
R113	VRD-ST2CD332J	AA			3.3 kohms,1/6W
R114	VRD-ST2CD332J	AA			3.3 kohms,1/6W
R115	VRD-ST2CD560J	AA			56 ohms,1/6W
R116	VRD-ST2CD560J	AA			56 ohms,1/6W
R117	VRS-CY1JB104J	AA			100 kohms,1/16W
R118	VRS-CY1JB104J	AA			100 kohms,1/16W
R119	VRS-CY1JB392J	AA			3.9 kohms,1/16W
R120	VRS-CY1JB392J	AA			3.9 kohms,1/16W
R121	VRS-CY1JB183J	AA			18 kohms,1/16W
R122	VRS-CY1JB183J	AA			18 kohms,1/16W
R123	VRS-CY1JB682J	AA			6.8 kohms,1/16W
R124	VRS-CY1JB682J	AA			6.8 kohms,1/16W
R126	VRS-CY1JB562J	AA			5.6 kohms,1/16W
R127	VRS-CY1JB562J	AA			5.6 kohms,1/16W
R128	VRS-CY1JB392J	AA			3.9 kohms,1/16W
R129	VRS-CY1JB392J	AA			3.9 kohms,1/16W
R130	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R131	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R132	VRS-CY1JB151J	AA			150 ohms,1/16W
R133	VRS-CY1JB151J	AA			150 ohms,1/16W
R134	VRS-CY1JB103J	AA			10 kohms,1/16W
R135	VRS-CY1JB103J	AA			10 kohms,1/16W
R136	VRS-CY1JB184J	AA			180 kohms,1/16W
R137	VRS-CY1JB184J	AA			180 kohms,1/16W
R138	VRS-CY1JB103J	AA			10 kohms,1/16W
R139	VRS-CY1JB103J	AA			10 kohms,1/16W
R140	VRS-CY1JB473J	AA			47 kohms,1/16W
R141	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R142	VRD-RT2HD820J	AA			82 ohms,1/2W
R143	VRS-CY1JB473J	AA			47 kohms,1/16W
R144	VRS-CY1JB223J	AA			22 kohms,1/16W
R145	VRD-ST2CD4R7J	AA			4.7 ohms,1/6W
R146	VRS-CY1JB103J	AA			10 kohms,1/16W
R147	VRS-CY1JB103J	AA			10 kohms,1/16W
R148	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R149	VRD-ST2EE151J	AA			150 ohms,1/4W
R150	VRS-CY1JB683J	AA			68 kohms,1/16W
R151	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
R152	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
R158	VRD-ST2EE221J	AA			220 ohms,1/4W
R601	VRD-ST2CD102J	AA			1 kohms,1/6W
R602	VRD-ST2CD102J	AA			1 kohms,1/6W
R603	VRD-ST2CD102J	AA			1 kohms,1/6W
R606	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R607	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R608	VRS-CY1JB152J	AA			1.5 kohms,1/16W
R609	VRS-CY1JB152J	AA			1.5 kohms,1/16W
R614	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R615	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R616	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R617	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R618	VRD-ST2CD331J	AA			330 ohms,1/6W
R619	VRS-CY1JB331J	AA			330 ohms,1/16W
R620	VRS-CY1JB223J	AA			22 kohms,1/16W
R622	VRD-ST2CD103J	AA			10 kohms,1/6W
R623	VRS-CY1JB183J	AA			18 kohms,1/16W
R630	VRS-CY1JB474J	AA			470 kohms,1/16W
R631	VRS-CY1JB104J	AA			100 kohms,1/16W
R641	VRS-CY1JB223J	AA			22 kohms,1/16W
R642	VRD-ST2CD223J	AA			22 kohms,1/6W
R643	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R644	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R682	VRD-ST2CD103J	AA			10 kohms,1/6W
R683	VRS-CY1JB183J	AA			18 kohms,1/16W
R685	VRS-CY1JB102J	AA			1 kohms,1/16W
R690	VRD-ST2CD682J	AA			6.8 kohms,1/6W
R691	VRD-ST2CD682J	AA			6.8 kohms,1/6W
R692	VRD-ST2CD333J	AA			33 kohms,1/6W
R693	VRD-ST2CD333J	AA			33 kohms,1/6W
R701	VRD-ST2CD102J	AA			1 kohms,1/6W

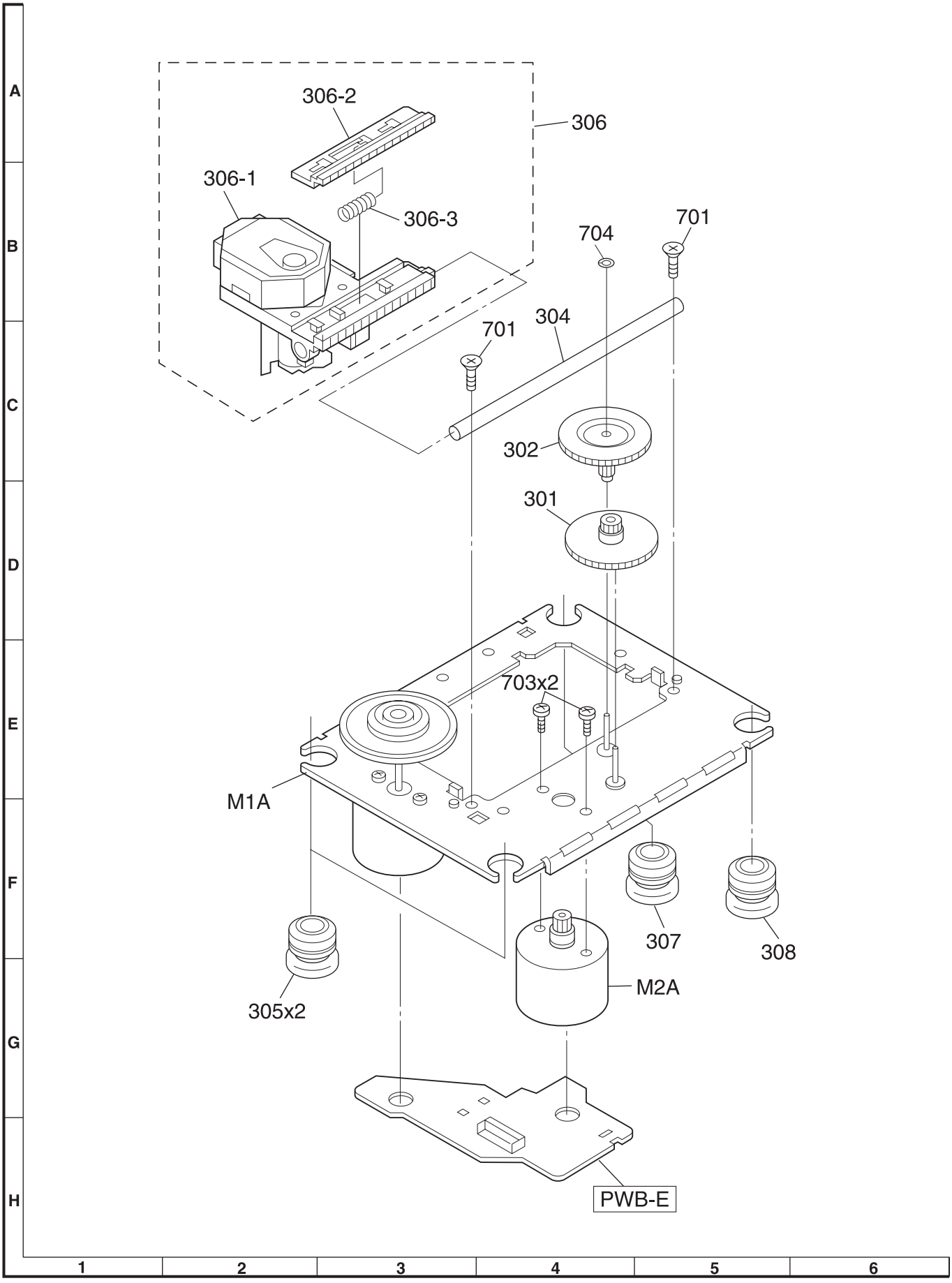
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] RESISTORS					
R702	VRD-ST2CD102J	AA			1 kohms,1/6W
R703	VRS-CY1JB102J	AA			1 kohms,1/16W
R704	VRS-CY1JB102J	AA			1 kohms,1/16W
R705	VRS-CY1JB102J	AA			1 kohms,1/16W
R706	VRD-ST2CD102J	AA			1 kohms,1/6W
R707	VRD-ST2CD102J	AA			1 kohms,1/16W
R708	VRS-CY1JB102J	AA			1 kohms,1/16W
R709	VRS-CY1JB102J	AA			1 kohms,1/16W
R710	VRS-CY1JB102J	AA			1 kohms,1/16W
R711	VRS-CY1JB102J	AA			1 kohms,1/16W
R712	VRS-CY1JB102J	AA			1 kohms,1/16W
R713	VRS-CY1JB182J	AA			1.8 kohms,1/16W
R714	VRS-CY1JB102J	AA			1 kohms,1/16W
R715	VRS-CY1JB221J	AA			220 ohms,1/16W
R716	VRD-ST2CD221J	AA			220 ohms,1/6W
R717	VRD-ST2CD102J	AA			1 kohms,1/6W
R718	VRS-CY1JB102J	AA			1 kohms,1/16W
R719	VRS-CY1JB102J	AA			1 kohms,1/16W
R720	VRD-ST2CD102J	AA			1 kohms,1/6W
R721	VRS-CY1JB102J	AA			1 kohms,1/16W
R722	VRS-CY1JB102J	AA			1 kohms,1/16W
R723	VRS-CY1JB102J	AA			1 kohms,1/16W
R724	VRD-ST2CD102J	AA			1 kohms,1/6W
R725	VRS-CY1JB102J	AA			1 kohms,1/16W
R726	VRS-CY1JB102J	AA			1 kohms,1/16W
R727	VRS-CY1JB102J	AA			1 kohms,1/16W
R728	VRS-CY1JB561J	AA			560 ohms,1/16W
R729	VRS-CY1JB102J	AA			1 kohms,1/16W
R730	VRS-CY1JB681J	AA			680 ohms,1/16W
R731	VRD-ST2CD222J	AA			2.2 kohms,1/6W
R732	VRS-CY1JB681J	AA			680 ohms,1/16W
R733	VRD-ST2CD102J	AA			1 kohms,1/6W
R734	VRD-ST2CD102J	AA			1 kohms,1/6W
R736	VRD-ST2CD102J	AA			1 kohms,1/6W
R741	VRD-ST2CD102J	AA			1 kohms,1/6W
R742	VRD-ST2CD102J	AA			1 kohms,1/6W
R743	VRD-ST2CD102J	AA			1 kohms,1/6W
R745	VRD-ST2CD102J	AA			1 kohms,1/6W
R747	VRD-ST2EE1R5J	AA			1.5 ohms,1/4W
R750	VRS-CY1JB473J	AA			47 kohms,1/16W
R752	VRD-ST2EE181J	AA			180 ohms,1/4W (LED PWB-D) Use 2 pcs
R753	VRS-CY1JB103J	AA			10 kohms,1/16W
R754	VRD-ST2EE331J	AA			330 ohms,1/4W
R756	VRD-ST2CD182J	AA			1.8 kohms,1/6W
R757	VRS-CY1JB102J	AA			1 kohms,1/16W
R758	VRS-CY1JB102J	AA			1 kohms,1/16W
R759	VRD-ST2CD122J	AA			1.2 kohms,1/6W
R760	VRS-CY1JB103J	AA			10 kohms,1/16W
R761	VRS-CY1JB103J	AA			10 kohms,1/16W
R762	VRS-CY1JB103J	AA			10 kohms,1/16W
R763	VRD-ST2CD103J	AA			10 kohms,1/6W
R764	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R765	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R766	VRS-CY1JB272J	AA			2.7 kohms,1/16W
R769	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R770	VRS-CY1JB103J	AA			10 kohms,1/16W
R771	VRS-CY1JB103J	AA			10 kohms,1/16W
R772	VRS-CY1JB103J	AA			10 kohms,1/16W
R773	VRS-CY1JB122J	AA			1.2 kohms,1/16W
R774	VRS-CY1JB103J	AA			10 kohms,1/16W
R775	VRS-CY1JB103J	AA			10 kohms,1/16W
R776	VRD-ST2CD473J	AA			47 kohms,1/6W
R777	VRS-CY1JB104J	AA			100 kohms,1/16W
R778	VRD-ST2CD101J	AA			100 ohms,1/6W
R779	VRS-CY1JB103J	AA			10 kohms,1/16W
R780	VRS-CY1JB103J	AA			10 kohms,1/16W
R781	VRD-ST2CD103J	AA			10 kohms,1/6W
R784	VRS-CY1JB182J	AA			1.8 kohms,1/16W
R785	VRS-CY1JB182J	AA			1.8 kohms,1/16W
R786	VRD-ST2EE1R5J	AA			1.5 ohms,1/4W
R787	VRS-CY1JB104J	AA			100 kohms,1/16W
R788	VRD-ST2CD392J	AA			3.9 kohms,1/6W
R792	VRS-CY1JB103J	AA			10 kohms,1/16W
R801	VRD-ST2CD104J	AA			100 kohms,1/6W
R802	VRD-ST2CD473J	AA			47 kohms,1/6W
R803	VRD-ST2CD123J	AA			12 kohms,1/6W
R804	VRD-ST2EE470J	AA			47 ohms,1/4W
R805	VRD-ST2EE470J	AA			47 ohms,1/4W
R806	VRD-ST2CD473J	AA			47 kohms,1/6W
R808	VRD-RT2HD222J	AA			2.2 kohms,1/2W
R853	VRD-ST2CD223J	AA			22 kohms,1/6W
R854	VRD-ST2CD332J	AA			3.3 kohms,1/6W
R857	VRD-ST2CD223J	AA			22 kohms,1/6W
R859	VRD-ST2CD103J	AA			10 kohms,1/6W
R864	VRD-ST2CD223J	AA			22 kohms,1/6W
R885	VRS-CY1JB821J	AA			820 ohms,1/16W
R886	VRS-CY1JB223J	AA			22 kohms,1/16W
R887	VRS-CY1JB223J	AA			22 kohms,1/16W
R888	VRD-ST2CD473J	AA			47 kohms,1/6W

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] RESISTORS					
R889	VRD-ST2CD473J	AA			47 kohms,1/6W
R891	VRD-ST2EE101J	AA			100 ohms,1/4W
R901	VRS-CY1JB563J	AA			56 kohms,1/16W
R902	VRS-CY1JB563J	AA			56 kohms,1/16W
R903	VRS-CY1JB102J	AA			1 kohms,1/16W
R904	VRS-CY1JB102J	AA			1 kohms,1/16W
R905	VRS-CY1JB561J	AA			560 ohms,1/16W
R906	VRS-CY1JB561J	AA			560 ohms,1/16W
R907	VRS-CY1JB563J	AA			56 kohms,1/16W
R908	VRS-CY1JB102J	AA			1 kohms,1/16W
R909	VRS-CY1JB333J	AA			33 kohms,1/16W
R910	VRD-ST2CD102J	AA			1 kohms,1/6W
R911	VRS-CY1JB563J	AA			56 kohms,1/16W
⚠ R912	VRG-ST2EC101J	AB			100 ohms,1/4W,Fusible
R913	VRN-VV3LAR22J	AC			0.22 kohms,3W
R916	VRN-VV3LAR22J	AC			0.22 kohms,3W
R917	VRN-VV3LAR10J	AD			0.1 kohms,3W
R918	VRD-ST2CD152J	AA			1.5 kohms,1/6W
R919	VRS-CY1JB182J	AA			1.8 kohms,1/16W
R920	VRS-CY1JB182J	AA			1.8 kohms,1/16W
R921	VRD-ST2CD152J	AA			1.5 kohms,1/6W
R922	VRN-VV3LAR10J	AD			0.1 kohms,3W
R925	VRD-RT2HD152J	AA			1.5 kohms,1/2W
R926	VRD-RT2HD152J	AA			1.5 kohms,1/2W
R927	VRD-ST2EE393J	AA			39 kohms,1/4W
R928	VRD-ST2EE393J	AA			39 kohms,1/4W
R929	VRD-ST2EE473J	AA			47 kohms,1/4W
R930	VRD-ST2EE473J	AA			47 kohms,1/4W
R934	VRD-ST2CD563J	AA			56 kohms,1/6W
R935	VRD-ST2CD563J	AA			56 kohms,1/6W
R937	VRS-CY1JB563J	AA			56 kohms,1/16W
R938	VRD-RT2HD100J	AA			10 ohms,1/2W
R939	VRD-RT2HD100J	AA			10 ohms,1/2W
R940	VRD-RT2HD100J	AA			10 ohms,1/2W
R941	VRD-RT2HD100J	AA			10 ohms,1/2W
R942	VRS-VV3DA471J	AB			470 ohms,2W
R943	VRS-VV3DA471J	AB			470 ohms,2W
R944	VRD-ST2CD152J	AA			1.5 kohms,1/6W
R945	VRD-ST2CD152J	AA			1.5 kohms,1/6W
R946	VRS-CY1JB473J	AA			47 kohms,1/16W
R947	VRS-CY1JB153J	AA			15 kohms,1/16W
R949	VRD-RT2HD102J	AA			1 kohms,1/2W
R950	VRD-ST2CD683J	AA			68 kohms,1/6W
R956	VRS-CY1JB102J	AA			1 kohms,1/16W
⚠ R958	VRG-ST2EC101J	AB			100 ohms,1/4W,Fusible
R968	VRD-ST2CD223J	AA			22 kohms,1/6W
R983	VRS-CY1JB333J	AA			33 kohms,1/16W
R984	VRS-CY1JB821J	AA			820 ohms,1/16W
R985	VRS-CY1JB822J	AA			8.2 kohms,1/16W
R986	VRS-CY1JB822J	AA			8.2 kohms,1/16W
R987	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R988	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R990	VRD-ST2CD102J	AA			1 kohms,1/6W
RD01	VRS-CY1JB681J	AA			680 ohms,1/16W
RD02	VRS-CY1JB821J	AA			820 ohms,1/16W
RD03	VRD-ST2CD102J	AA			1 kohms,1/6W
RD04	VRS-CY1JB152J	AA			1.5 kohms,1/16W
RD05	VRD-ST2CD681J	AA			680 ohms,1/6W
RD06	VRS-CY1JB821J	AA			820 ohms,1/16W
RD07	VRS-CY1JB102J	AA			1 kohms,1/16W
RD09	VRS-CY1JB681J	AA			680 ohms,1/16W
RD10	VRS-CY1JB821J	AA			820 ohms,1/16W
RD11	VRS-CY1JB102J	AA			1 kohms,1/16W
RD12	VRS-CY1JB152J	AA			1.5 kohms,1/16W
RD13	VRS-CY1JB222J	AA			2.2 kohms,1/16W
RS01	VRS-CY1JB103J	AA			10 kohms,1/16W
RS03	VRS-CY1JB103J	AA			10 kohms,1/16W
RS05	VRS-CY1JB473J	AA			47 kohms,1/16W
RS07	VRS-CY1JB102J	AA			1 kohms,1/16W
RS09	VRS-CY1JB102J	AA			1 kohms,1/16W
RS11	VRS-CY1JB471J	AA			470 kohms,1/16W
RS15	VRS-CY1JB473J	AA			47 kohms,1/16W
RS17	VRS-CY1JB104J	AA			100 kohms,1/16W
RS19	VRS-CY1JB123J	AA			12 kohms,1/16W
RS21	VRD-ST2CD103J	AA			10 kohms,1/6W
RS22	VRD-ST2CD103J	AA			10 kohms,1/6W
RS23	VRD-ST2CD103J	AA			10 kohms,1/6W
RS24	VRD-ST2CD472J	AA			4.7 kohms,1/6W
RS25	VRD-ST2CD333J	AA			33 kohms,1/6W
RS27	VRS-CY1JB122J	AA			1.2 kohms,1/16W
RS29	VRS-CY1JB473J	AA			47 kohms,1/16W
RS30	VRS-CY1JB000J	AA			0 ohms,Jumper,0.8x1.55mm,Green
RS35	VRS-CY1JB103J	AA			10 kohms,1/16W
[9] OTHER CIRCUITRY PARTS					
BI601/CNS601	QCNWNA261AWPZ	AG			Connector Ass'y,8/7Pin
BI603/CNS603	QCNWN2714AWPZ	AK			Connector Ass'y,6/5Pin
BI702/CNS702	QCNWNA267AWPZ	AF			Connector Ass'y,9/10Pin

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] OTHER CIRCUITRY PARTS					
BI801/CNS801	QCNWNA270AWPZ	AK			Connector Ass'y,9/10Pin
CNP1	QCNCWYP16AWZZ	AD			Socket,16Pin
CNP2	92LCONE4P53253	AB			Plug,4Pin
CNP3	92LCONE7P53254	AB			Plug,7Pin
CNP4	QCNCWZX11AWZZ	AC			Socket,11Pin
CNP2A	92LCONE4P53254	AB			Plug,4Pin
CNP4A	QCNCWZO11AWZZ	AC			Socket,11Pin
CNP7	QCNCWZY14AWZZ	AD			Socket,14Pin
CNP101	QCNCM705CAFZZ	AA			Plug,3Pin
CNP102	QCNCM705GAFZZ	AB			Plug,7Pin
CNP303	QCNCWZX11AWZZ	AC			Socket,11Pin
CNP603	92LCONE5P53253	AB			Plug,5Pin
CNP702	QCNCWZY07AWZZ	AC			Socket,7Pin
CNP703	QCNCWZY14AWZZ	AD			Socket,14Pin
CNP707	QCNCM704BAFZZ	AA			Plug,2Pin (Use in LED PWB-D) Use 2 pcs
CNP701A	QCNCWZY22AWZZ	AD			Socket,22Pin
CNP701B	QCNCWZX22AWZZ	AD			Socket,22Pin
CNP801	QCNCM035KAWZZ	AG			Plug,9Pin
CNP802	92LCONE6P53253	AC			Plug,6Pin
⚠ CNP805	QCNCM049BAWZZ	AC			Plug,2Pin
CNP901	QCNCW012EAWZZ	AC			Socket,5Pin
CNP971	92LCONE2P53253	AB			Plug,2Pin
CNS01	QCNCM704BAFZZ	AA			Plug,2Pin
CNS02	QCNCM704BAFZZ	AA			Plug,2Pin
CNS971	QCNWNA080AWPZ	AC			Connector Ass'y,2Pin
CNS2A/B	QCNWNA558AWPZ	AF			Connector Ass'y,4Pin
CON / WIRE	QCNWNA309AWPZ	AC			Connector Ass'y
⚠ F801	QFS-D502ABGNI	AC			T5AL 250V
⚠ F802	QFS-D502ABGNI	AC			T5AL 250V
⚠ F803	QFS-D202ABGNI	AC			T2AL 250V
⚠ F804	QFS-D202ABGNI	AC			T2AL 250V
⚠ F805	QFS-D502ABGNI	AC			T5AL 250V
⚠ F806	QFS-D252ABGNI	AE			T2.5AL 250V
⚠ F807	QFS-D252ABGNI	AE			T2.5AL 250V
FFC1	QCNWN2700AWPZ	AD			Flat Cable,16Pin
FFC4	QCNWN2701AWPZ	AD			Flat Cable,11Pin
FFC303	QCNWN2525AWZZ	AD			Flat Cable,11Pin
FFC701	QCNWN2719AWPZ	AF			Flat Cable,22Pin
FFC702	QCNWN2495AWZZ	AD			Flat Cable,7Pin
FFC703	QCNWN2717AWPZ	AD			Flat Cable,11Pin
FL701	VVKNA12MM54-1	AU			FL Display
FW901	QCNWN2711AWPZ	AD			Flat Wire
JK690	QSOCJ0313AWZZ	AF			Jack,Game Input
JK691	QSOCJ0120AWZZ	AD			Jack,Video Out
JK692	QJAKM0004AWZZ	AK			Jack,Headphones
JOG701	QSW-ZA001AWZZ	AE			Volume Variable
LG1	QLUGPA001AWZZ	AC			Lug Terminal
LG2	QLUGPA001AWZZ	AC			Lug Terminal
LG3	QLUGPA001AWZZ	AC			Lug Terminal
LG4	QLUGPA001AWZZ	AC			Lug Terminal
LUG WIRE	QCNWN1860AWZZ	AC			Lug Wire
LUG WIRE	QCNWNA139AWPZ	AC			Lug Wire
LUG2	QCNWNA527AWPZ	AC			Lug Wire
LUG3	QLUGP0002AWZZ	AB			Lug Terminal
RL914	RRLYD0016AWZZ	AH			Relay,Speaker
RX701	VHLK603TH2E-1	AG			Remote Sensor,603TH2E-1
SO901	QTANA0424AWZZ	AE			Terminal,Speaker
SW1	QSW-P9003AWZZ	AD			Switch,Push type [CLAMP]
SW2	QSW-P9003AWZZ	AD			Switch,Push type [TRAY 1]
SW3	QSW-P9003AWZZ	AD			Switch,Push type [TRAY 2]
SW4	QSW-P9006AWZZ	AF			Switch,Push type [DISC]
SW601	QSW-S0024AWZZ	AE			Span Selector
SW701	92LSWICH1401AT	AC			Switch,Key Type [POWER]
SW702	92LSWICH1401AT	AC			Switch,Key Type [CD]
SW703	92LSWICH1401AT	AC			Switch,Key Type [TUNER (BAND)]
SW704	92LSWICH1401AT	AC			Switch,Key Type [AUX]
SW705	92LSWICH1401AT	AC			Switch,Key Type [TAPE]
SW707	92LSWICH1401AT	AC			Switch,Key Type [PLAY/PAUSE]
SW708	92LSWICH1401AT	AC			Switch,Key Type [PRESET UP]
SW709	92LSWICH1401AT	AC			Switch,Key Type [PRESET DOWN]
SW710	92LSWICH1401AT	AC			Switch,Key Type [STOP]
SW711	92LSWICH1401AT	AC			Switch,Key Type [DISC 1]
SW712	92LSWICH1401AT	AC			Switch,Key Type [DISC 2]
SW713	92LSWICH1401AT	AC			Switch,Key Type [DISC 3]
SW714	92LSWICH1401AT	AC			Switch,Key Type [DISC 4]
SW715	92LSWICH1401AT	AC			Switch,Key Type [DISC 5]
SW716	92LSWICH1401AT	AC			Switch,Key Type [CD OPEN / CLOSE]
SW801	QSOCE0008AWZZ	AH			Voltage Selector
WTM901	QCNCW019EAWZZ	AB			Socket,5Pin

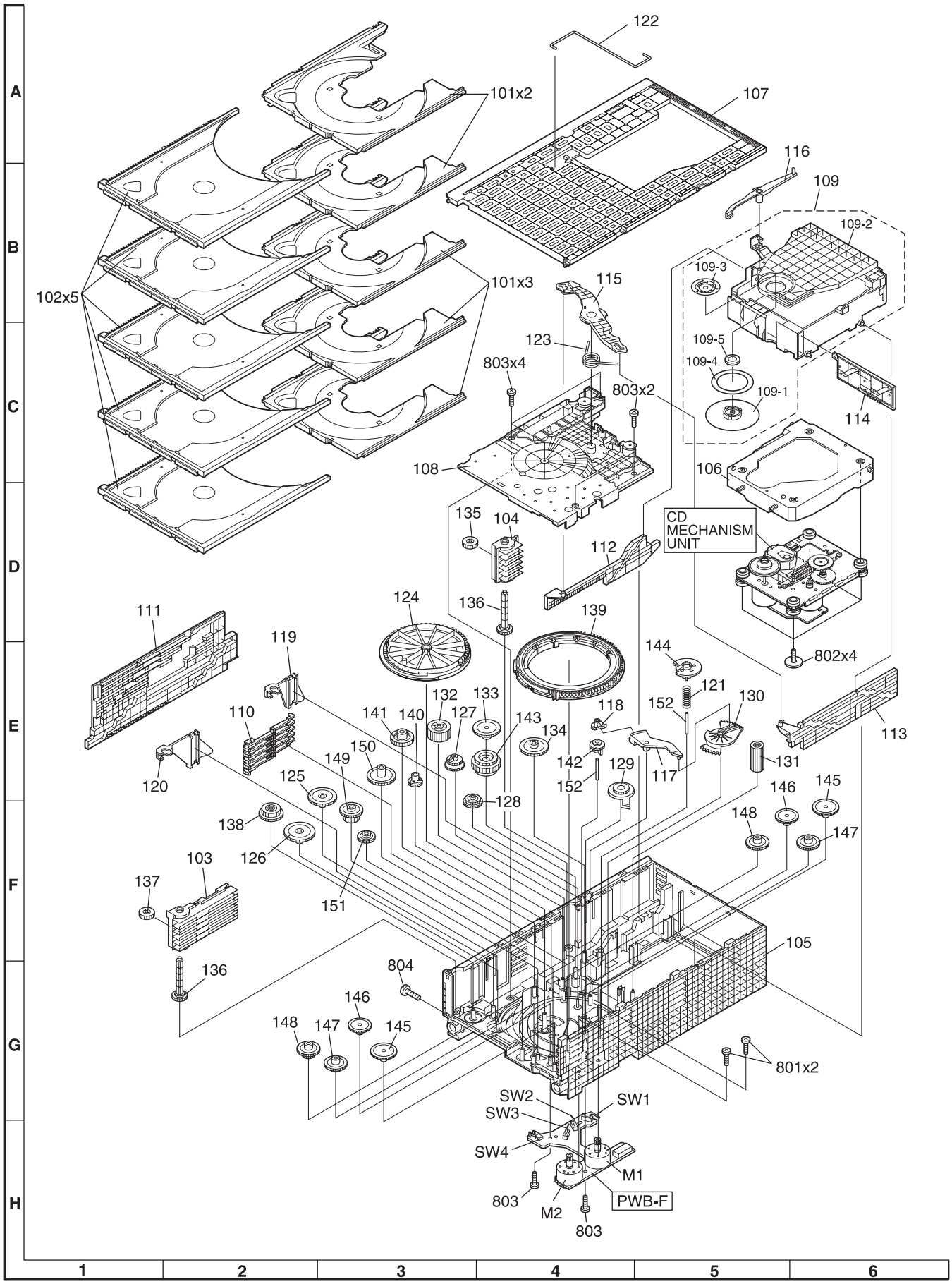
-MEMO-

[10] CD MECHANISM PARTS



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[10] CD MECHANISM PARTS					
301	NGERH0011AWZZ	AC			Gear,Middle
302	NGERH0012AWZZ	AC			Gear,Drive
304	NSFTM0020AWFW	AD			Shaft,Guide
305	92LMCUSN1524A	AD			Cushion
⚠ 306	92LHPC1LVASY	AZ			Pickup Unit Ass'y
306- 1	----------	-			Pickup Unit (Not Replacement Item)
306- 2	NGERR0043AFZZ	AC			Gear,Rack
306- 3	MSPRC0961AFZZ	AA			Spring,Rack
307	PCUSG0001AWSA	AD			Cushion
308	PCUSG0004AWSA	AD			Cushion
701	XBSY726P06000	AA			Screw,M2.6x6mm
703	XBBY720P03000	AA			Screw,M2x3mm
704	LX-WZ1070AFZZ	AA			Washer,M1.5xM3.8x0.25mm
M1A	92LMTR6447CASY	AQ			Motor with Chassis [Spindle]
M2A	92LMTR6447BASY	AN			Motor with Gear [Sled]

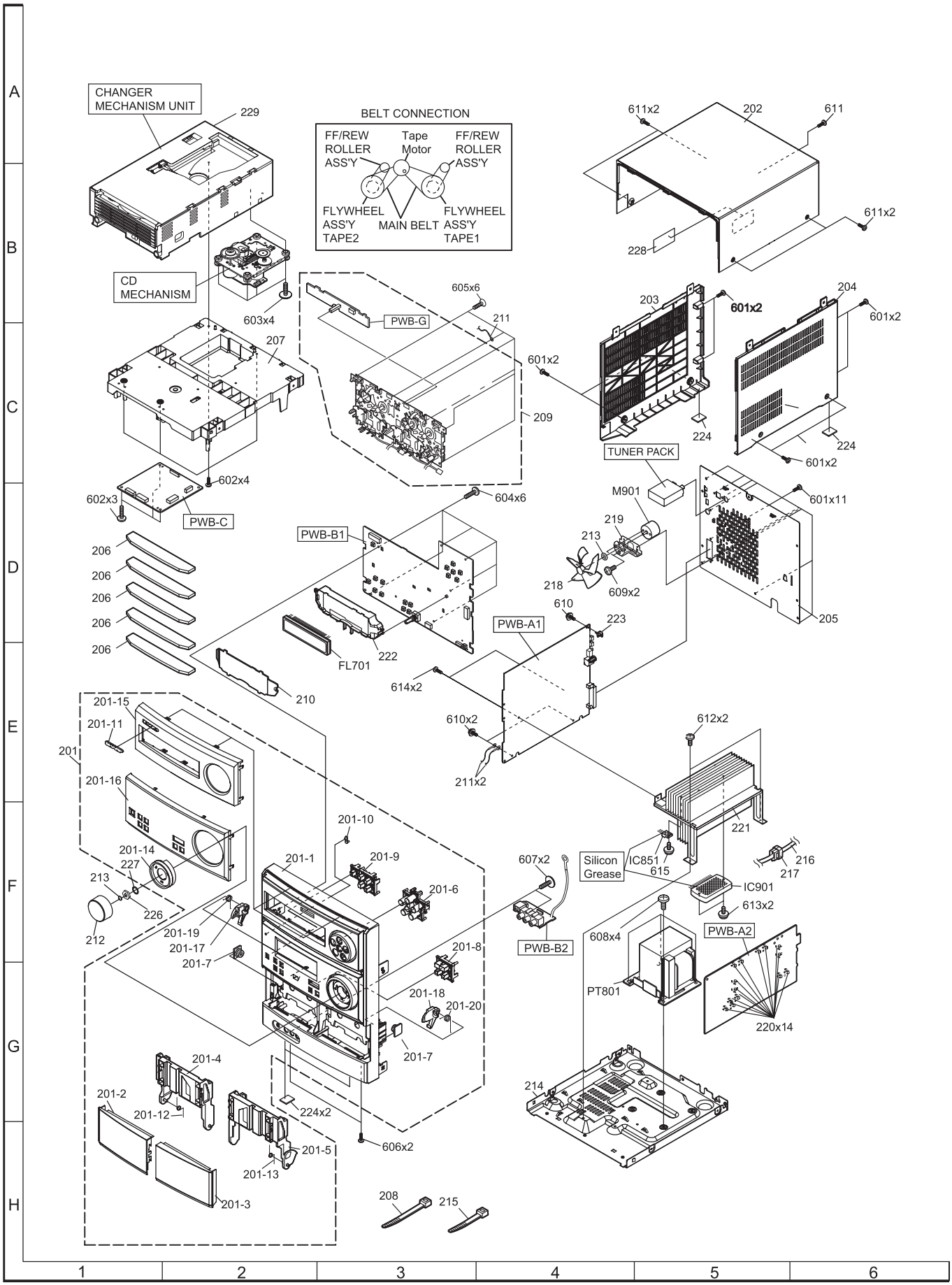
[11] CHANGER MECHANISM PARTS



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[11] CHANGER MECHANISM PARTS					
101	GCOVA1513AWZZ	AF			Disc Tray
102	GCOVA1514AWZZ	AF			Guide Tray
103	LANGG0008AWZZ	AD			Outer Tray Guide
104	LANGG0009AWZZ	AC			Inner Tray Guide
105	LCHSM0194AWZZ	AP			Main Base
106	LHLDZ9017AWZZ	AF			CD Mechanism Holder
107	LPLTP0014AWZZ	AK			Top Plate
108	LPLTP0015AWZZ	AG			Gear Plate
109	MHOLD5529ASY	AP			Up/Down Holder Ass'y
109- 1	LHLDM9001AWZZ	AD			Stabilizer
109- 2	LHLDZ9019AWM1	AK			Up/Down Holder Ass'y
109- 3	LPLTM0017AWZZ	AB			Stabilizer Plate
109- 4	LPLTMA001AWFW	AC			Plate
109- 5	PMAGF0003AWZZ	AF			Magnet
110	MLEVP0129AWZZ	AC			Tray Lock Lever
111	MLEVP0130AWZZ	AG			Gear Up/Down Board
112	MLEVP0131AWZZ	AD			Mechanism Up/Down Board (L)
113	MLEVP0132AWZZ	AD			Mechanism Up/Down Board (R)
114	MLEVP0133AWZZ	AC			Mechanism Clamp Board
115	MLEVP0134AWZZ	AD			L/R Joint Lever
116	MLEVP0135AWZZ	AC			Tray Set Lever
117	MLEVP0136AWZZ	AC			Mechanism Clamp Switch Lever
118	MLEVP0137AWZZ	AC			Mechanism Clamp Switch Arm
119	MLEVP0138AWZZ	AB			Inner Gear Up/Down Lever
120	MLEVP0139AWZZ	AC			Outer Gear Up/Down Lever
121	MSPRC0044AWFJ	AB			Shift Spring
122	MSPRD0191AWFJ	AC			Disc Stop Spring
123	MSPRD0192AWFJ	AB			Balance Spring
124	NGERH0176AWZZ	AF			Tray Big Gear
125	NGERH0177AWZZ	AC			Tray Front Gear A
126	NGERH0178AWZZ	AC			Tray Front Gear B
127	NGERH0179AWZZ	AC			Tray Rear Gear A
128	NGERH0180AWZZ	AB			Tray Rear Gear B
129	NGERH0181AWZZ	AC			Mechanism Clamp Gear A
130	NGERH0182AWZZ	AC			Mechanism Clamp Joint Gear
131	NGERH0183AWZZ	AC			Mechanism Clamp Board Gear
132	NGERH0184AWZZ	AC			Tray Rear Joint Gear A
133	NGERH0185AWZZ	AC			Tray Rear Joint Gear B
134	NGERH0186AWZZ	AC			Tray Rear Joint Gear C
135	NGERH0187AWZZ	AB			Tray Rear Drive Gear
136	NGERH0188AWZZ	AC			Tray Drive Gear
137	NGERH0189AWZZ	AB			Tray Front Drive Gear
138	NGERH0190AWZZ	AC			Tray Front Joint Gear
139	NGERH0191AWZZ	AE			Mode Big Gear
140	NGERH0192AWZZ	AC			G-Up/Down Gear A
141	NGERH0193AWZZ	AC			G-Up/Down Gear B
142	NGERH0194AWZZ	AB			Mechanism Up/Down Gear A
143	NGERH0195AWZZ	AC			Mechanism Up/Down Gear B
144	NGERH0196AWZZ	AC			Mechanism Clamp Switch Gear
145	NGERH0198AWZZ	AB			Reduction Gear A
146	NGERH0199AWZZ	AB			Reduction Gear B
147	NGERH0200AWZZ	AB			Reduction Gear C
148	NGERH0201AWZZ	AB			Reduction Gear D
149	NGERH0202AWZZ	AB			Up/Down Reduction Gear E
150	NGERH0203AWZZ	AB			Up/Down Reduction Gear F
151	NGERH0204AWZZ	AB			Tray Reduction Gear E
152	NSFTT0084AWFD	AD			Shaft,Main Base
801	LX-BZA006AWF7	AB			Screw,Special
802	LX-EZ0005AWF7	AB			Screw,Special
803	XEBY720P08000	AA			Screw,M2x8mm
804	XEBY730P10000	AA			Screw,M3x10mm
M1	92LMTR5529BASY	AD			Motor with Gear [Tray]
M2	92LMTR5529BASY	AD			Motor with Gear [Main Cam]
SW1	QSW-P9003AWZZ	AD			Switch,Push Type [CLAMP]
SW2	QSW-P9003AWZZ	AD			Switch,Push Type [TRAY SW1]
SW3	QSW-P9003AWZZ	AD			Switch,Push Type [TRAY SW2]
SW4	QSW-P9006AWZZ	AF			Switch,Push Type [DISC]

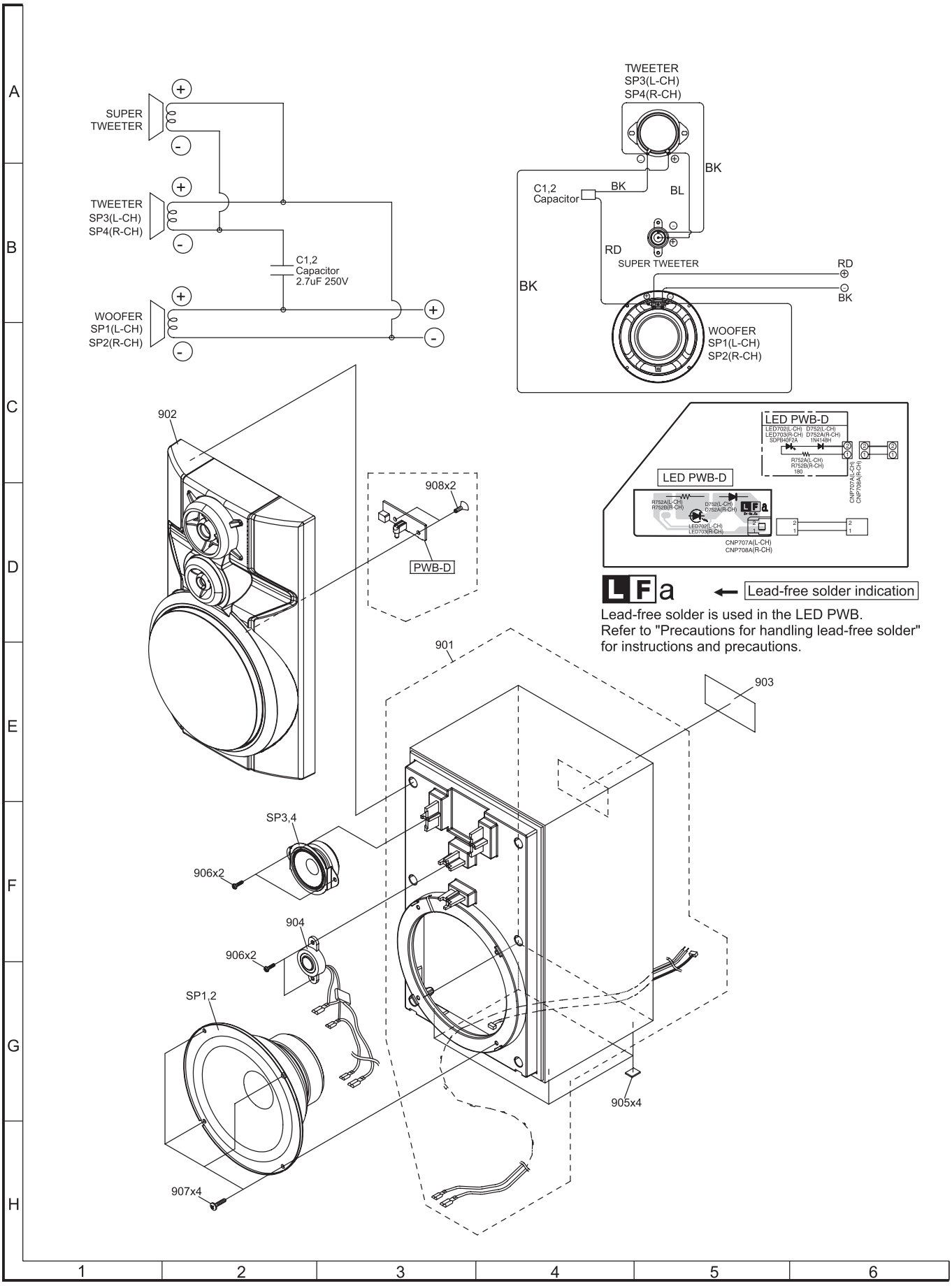
CD-MPX870W

[12] CABINET PARTS



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[12] CABINET PARTS					
201	CCABA6570AW01	BB			Front Panel Ass'y
201-1	----------	-			Front Panel
201-2	GCOVAA140AWSA	AG			Cover, Cassette [Tape 1]
201-3	GCOVAA141AWSA	AG			Cover, Cassette [Tape 2]
201-4	GDORF0127AWSA	AE			Holder, Cassette [Tape 1]
201-5	GDORF0128AWSA	AE			Holder, Cassette [Tape 2]
201-6	JKNBZA184AWSA	AE			Button, Disc Number
201-7	MLiF-A001AWZZ	AD			Damper
201-8	JKNBZA186AWSA	AE			Button, Operation
201-9	JKNBZA185AWSA	AE			Button, Function & Power
201-10	GCOVA1364AWSA	AB			Cover, Timer
201-11	HBDGB1007AWSA	AD			Badge, SHARP
201-12	MSPRDA002AWFJ	AB			Spring, Cassette [Tape 1]
201-13	MSPRDA003AWFJ	AB			Spring, Cassette [Tape 2]
201-14	HDECQA246AWSA	AD			Volume Knob Ring
201-15	HDECQA274AWSA	AK			Decoration Panel, A
201-16	HDECQA289AWSA	AK			Decoration Panel, B
201-17	MLOKC0014AWZZ	AC			Lock, Cassette [Tape 1]
201-18	MLOKC0015AWZZ	AC			Lock, Cassette [Tape 2]
201-19	MSPRD0196AWFJ	AB			Spring, Cassette Lock [Tape 1]
201-20	MSPRD0197AWFJ	AC			Spring, Cassette Lock [Tape 2]
202	GCAB-A036AWSA	AU			Top Cabinet
203	GiTASA142AWSA	AN			Side Panel, Left
204	GiTASA143AWSA	AN			Side Panel, Right
205	GiTARA372AWSA	AP			Rear Panel [For Latin of America]
205	GiTARA373AWSA	AP			Rear Panel [For Argentine]
205	GiTARA377AWSA	AP			Rear Panel [For Australia/New Zealand]
206	GCOVAA139AWSA	AD			Disc Tray Cover
207	LCHSZA011AWSA	AP			Chassis, Changer Unit
208	92LNBAND1318A	AA			Nylon Band, 80mm
209	KMECBA012AWZZ	BB			Tape Mechanism Ass'y
210	HDECQ1110AWSA	AF			Panel, Edge Light
211	QCNWN1860AWZZ	AC			Lug Wire
212	JKNBKA022AWSB	AL			Knob, Volume
213	92LCSPR1431C	AA			Spring, Ring
214	LCHSMA044AWFW	AR			Chassis, Main
215	LBND-1011AWZZ	AA			Nylon Band
⚠ 216	QACCA001AW00	AP			AC Power Supply Cord [For Latin of America]
⚠ 216	QACCL0008AW00	AN			AC Power Supply Cord [For Australia/New Zealand]
⚠ 216	QACCZ0013AW00	AQ			AC Power Supply Cord [For Argentine]
⚠ 217	LBSHC0002AWZZ	AD			Bushing, AC Power Supply Cord
218	NFANP0001AWZZ	AD			Rotary, Fan
219	LANGK0437AWFW	AE			Bracket, Fan Support A
⚠ 220	92LFSHOLD1652T	AB			Holder, Fuse
221	PRDARA018AWFW	AX			Heat Sink, Main
222	LHLDZ9024AWZZ	AD			Holder, FL Display
223	LANGT0042AWFW	AC			Bracket, PWB support
224	PCUSG0022AWZZ	AB			Cushion, Leg
226	----------	-			Nut (Not Replacement Item)
227	----------	-			Washer (Not Replacement Item)
228	TLABS0354AWZZ	AC			Label, Class 3A
229	CDCMECA5529SRC	BH			Changer Mechanism Unit
601	XJBY730P10000	AA			Screw, M3 X10mm
602	XEBY730P10000	AA			Screw, M3 X10mm
603	LX-EZ0005AWF7	AB			Screw, M2.6 X10mm
604	XEBY726P10000	AA			Screw, M2.6 X10mm
605	XESY730P10000	AA			Screw, M3 X10mm
606	XJSY730P08000	AA			Screw, M3 X8mm
607	LX-EZ0010AWF7	AB			Screw, Special
608	XHBY740P08000	AB			Screw, M4 X8mm
609	XBBY720P04000	AA			Screw, M2 X4mm
610	LX-JZ0010AFF7	AB			Screw, M3 X10mm
611	XEBY730P12000	AA			Screw, M3 X12mm
612	XHBY730P06000	AB			Screw, M3 X6mm
613	LX-JZ0037AWF7	AC			Screw, M3 X18mm
614	LX-JZ0044AWF8	AB			Screw, M3 X10mm
615	LX-JZ0036AWF7	AC			Screw, M3 X12mm
M901	RMOTVA015AWZZ	AH			Motor, Air Cooling Fan

[13] SPEAKERS BOX PARTS



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[13] SPEAKERS BOX PARTS					
901	GBOXSA125AW01	BH			Wooden Box Ass'y
902	CPNLSA055AW01	AX			Front Panel Ass'y
903	TSPC-A616AWZZ	AC			Label, Specification
904	LHLDZA162AWM1	AQ			Super Tweeter Ass'y
905	PCUSGA020AWZZ	AB			Cushion, Foot
906	XEBY730P10000	AA			Screw, M3 x10mm
907	XEPY740P16000	AB			Screw, M4 X16mm
908	XESY730P10000	AA			Screw, M3 x10mm
SP1,2	RSP-ZA178AWZZ	BD			Woofer
SP3,4	RSP-ZA179AWZZ	AR			Tweeter
[14] ACCESSORIES/PACKING PARTS					
1	QANTL0010AWZZ	AP			AM Loop Antenna
2	92LFANT1535A	AF			FM Antenna
3	RRMCGA090AWSA	AQ			Remote Control
4	SPAKAA121AWZZ	AN			Packing Add., Unit, Left/right
5	SPAKAA116AWZZ	AL			Packing Add., Speaker, Top/Bottom
6	SPAKCA349AWZZ	AW			Packing Case
7	SSAKAA006AWZZ	AB			Polyethylene Bag, Accessories
8	SPAKP0032AWZZ	AF			Polyethylene Bag, Unit
9	SSAKHA077AWZZ	AD			Polyethylene Bag, Speaker
10	TINSZA205AWZZ	AM			Operation Manual
11	TLABZA267AWZZ	AB			Label, WMA
12	TLABZA392AWZZ	AD			Label, Pop Tape 1
13	TLABZA368AWZZ	AD			Label, Pop Tape 2
14	TLABZA329AWZZ	AB			Caution, Battery [For Australia/New Zealand only]
15	SPAKP0026AWZZ	AB			Polyethylene Bag, AC Cord [For Argentine only]
16	TLABSA040AWZZ	AB			Label, Sellos Mark [For Argentine only]
17	TLABZA322AWZZ	AB			Label, ARG Mark [For Argentine only]
18	QPLGA0004AWZZ	AF			AC Plug Adaptor [For Latin of America only]
[15] P.W.B. ASSEMBLY (Not Replacement Item)					
PWB-A	92LPWB6570MANS	-			Main (A1) / Power (A2)
PWB-B	92LPWB6570DPLS	-			Display (B1) / Game Input (B2)
PWB-C	92LPWB6514CDUS	-			CD Servo
PWB-D	92LPWB6274LEDS	-			LED
PWB-E	QPWBF0027AWZZ	AD			CD Motor (PWB Only)
PWB-F	QPWBF1055AWZZ	AE			CD Changer Motor (PWB Only)
PWB-G	-	-			Tape Mechanism (PWB Only)
[16] OTHER SERVICE PARTS					
	UDSKA0004AFZZ	AZ			CD Optical Pickup Lens Cleaner Disc

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. No.
3. PART NO.
4. DESCRIPTION

★ MARK: SPARE PARTS-DELIVERY SECTION

For U.S.A. only

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor,
Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

VCC ..... Ceramic type
VCK ..... Ceramic type
VCT ..... Semiconductor type
VC • • MF ..... Cylindrical type (without lead wire)
VC • • MN ..... Cylindrical type (without lead wire)
VC • • TV ..... Square type (without lead wire)
VC • • TQ ..... Square type (without lead wire)
VC • • CY ..... Square type (without lead wire)
VC • • CZ ..... Square type (without lead wire)
VC • • • • • • • • • J .. The 13th character represents capacity difference.
("J" ±5%, "K" ±10%, "M" ±20%, "N" ±30%,
"C" ±0.25 pF, "D" ±0.5 pF, "Z" +80-20%.)

If there are no indications for the electrolytic capacitors, error is ±20%.

Resistors

VRD ..... Carbon-film type
VRS ..... Carbon-film type
VRN ..... Metal-film type
VR • • MF ..... Cylindrical type (without lead wire)
VR • • MN ..... Cylindrical type (without lead wire)
VR • • TV ..... Square type (without lead wire)
VR • • TQ ..... Square type (without lead wire)
VR • • CY ..... Square type (without lead wire)
VR • • CZ ..... Square type (without lead wire)
VR • • • • • • • • • J .. The 13th character represents error.
("J" ±5%, "F" ±1%, "D" ±0.5%.)

If there are no indications for other parts, the resistors are ±5% carbon-film type.

-MEMO-

SHARP

COPYRIGHT © 2006 BY SHARP CORPORATION

ALL RIGHTS RESERVED.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying , recording, or otherwise, without prior written permission of the publisher.

SHARP CORPORATION
Sharp-Roxy Corporation
Sungai Petani, Kedah,
Malaysia

Printed in Malaysia
A0606-1MX•RR•M
SCA•LAG•ARG